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PANAMA CANAL COMMISSION

ANNUAL REPORT

•

FISCAL YEAR ENDED SEPTEMBER 30, 1987

PANAMA CANAL COMMISSION

**Balboa, Republic of Panama
OFFICE OF THE ADMINISTRATOR**

FROM THE ADMINISTRATOR

It is a pleasure to submit the annual report of the Panama Canal Commission for fiscal year 1987.

This report covers the eighth year of operation under the terms of the Panama Canal Treaty. During this period, Canal traffic and tolls revenue edged moderately upward over the previous year. Oceangoing transits increased 2.4 percent with a near parallel increase in tolls revenue of 2.2 percent. Most of the growth resulted from a sharp improvement in corn shipments and gains in a number of other commodities. While overall traffic was slightly up from last year, average vessel size remained near 1986 levels.

To ensure the long-term effective operation of the Canal, continued emphasis was placed on maintenance and modernization programs. Important major projects included the overhaul of the massive sea gates at Miraflores Locks, the addition of five new towing locomotives at Gatun Locks, dredging of the Pacific approach channel and enhancement of the new, second generation computerized marine traffic scheduling and monitoring system.

In the area of human resources, training programs continued to receive high priority to ensure increased participation by qualified Panamanians

throughout the organization. Panamanian citizens now comprise approximately 83 percent of the Commission work force with increasing involvement at all management levels. During the past year, the Commission's binational work force demonstrated exceptional esprit de corps, while providing high quality transit service.

The Panama Canal Commission's performance during fiscal year 1987 demonstrated once again that the waterway remains an important and efficient conduit for world trade. I am confident that our dedicated work force and the effectiveness of our ongoing modernization and maintenance efforts will allow the Panama Canal to continue handling the demand for its unique transit service well into the future.



D. P. McAULIFFE
Administrator

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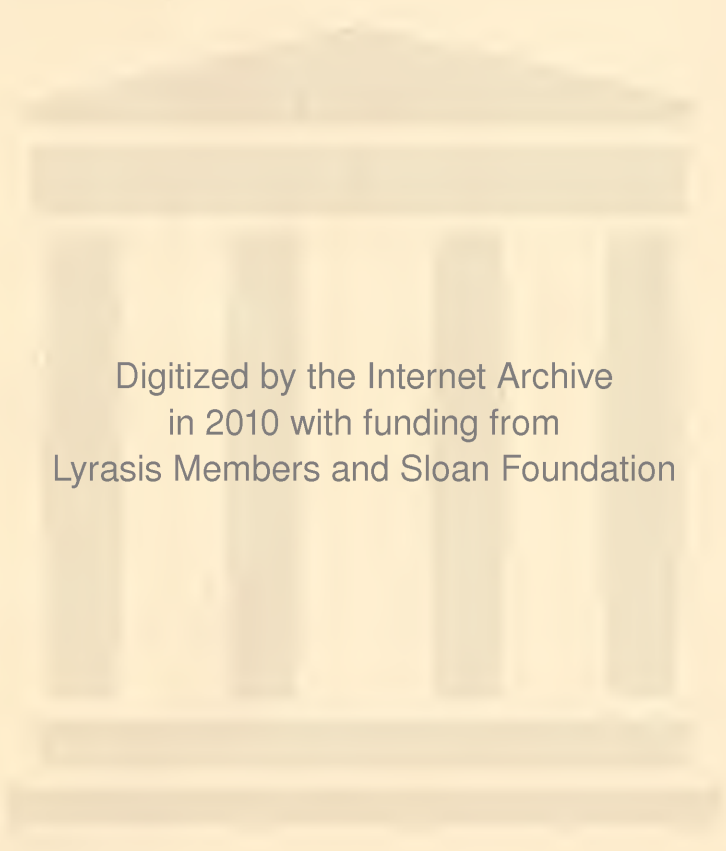
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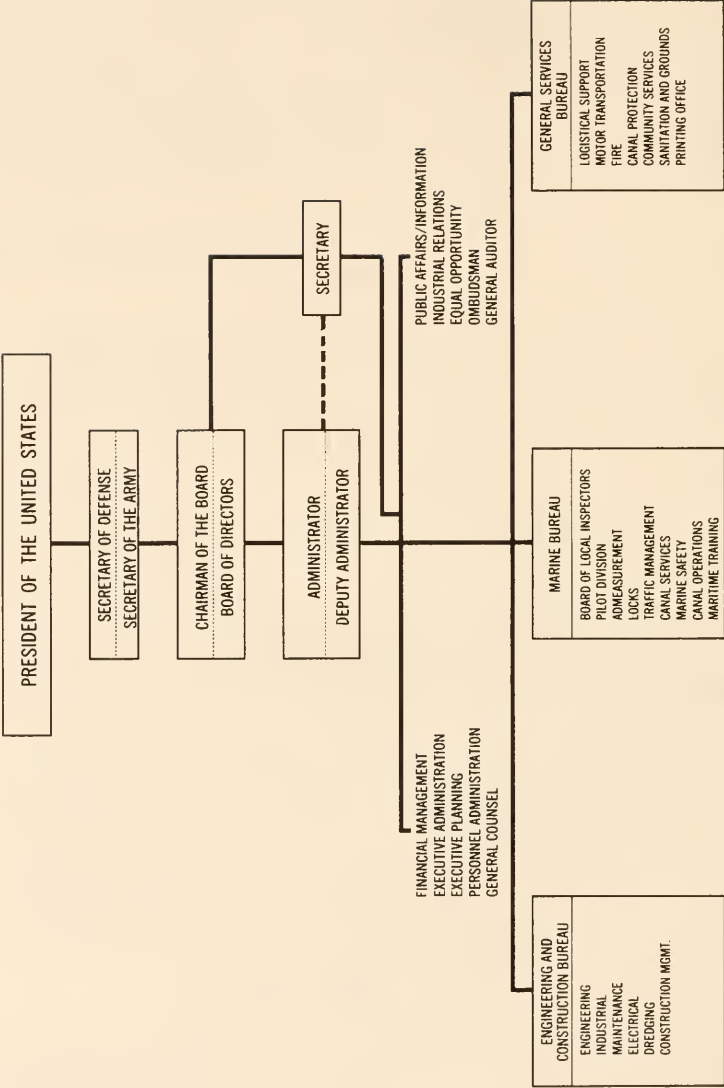
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PANAMA CANAL COMMISSION



INTRODUCTION

ORGANIZATION

The Panama Canal Commission is an agency of the Executive Branch of the United States Government, provided for by the Panama Canal Treaty of 1977, and established by the Panama Canal Act of 1979 (93 Stat. 452; 22 U.S.C. 3601 et seq), enacted September 27, 1979. The authority of the President of the United States with respect to the Commission is exercised through the Secretary of Defense and the Secretary of the Army. The Commission is supervised by a nine-member Board. Five members are nationals of the United States appointed by the President with the advice and consent of the Senate. Four members are nationals of the Republic of Panama who are proposed by the Republic of Panama for appointment by the President.

The Commission was established to carry out the responsibilities of the United States with respect to the Panama Canal under the Panama Canal Treaty of 1977. In fulfilling these obligations, the Commission manages, operates, and maintains the Canal, its complementary works, installations, and equipment, and provides for the orderly transit of vessels through the Canal. The Commission will perform these functions until the treaty terminates on December 31, 1999, when the Republic of Panama will assume full responsibility for the Canal.

The Commission is expected to recover through tolls and other revenues all costs of operating and maintaining the Canal, including interest, depreciation, capital for plant replacement, expansion and improvements, and payments to the Republic of Panama for public services and annuities, in accordance with paragraph 5 of Article III and paragraphs 4(a) and (b) of Article XIII, respectively, of the Panama Canal Treaty of 1977. Revenues from tolls and all other sources are deposited in the U.S. Treasury in an account known as the Panama Canal Commission Fund. Appropriations for operating expenses and capital improvements are enacted annually by the Congress and are limited to the sum of the estimated receipts for the year, plus any unexpended balances in the Panama Canal Commission Fund.

THE CANAL

The Panama Canal is a lock-type canal approximately 51 miles long from deep water to deep water. The minimum width of the navigable

channel is 500 feet. Navigable channel depth can vary according to the amount of water available in Canal storage areas; however, the normal permissible transit draft is 39 feet 6 inches tropical fresh water.

Vessels transiting the Canal are raised in three steps to the level of Gatun Lake, the principal source of Canal water, then lowered to sea level again in three steps. The three sets of Canal locks are paired so as to permit simultaneous lockage of two vessels in the same or opposite direction.

Since August 15, 1914, the official date of its opening, the Panama Canal has served world trade virtually without interruption. Through this fiscal year, a total of 677,521 vessels of all types have transited with 570,239 or 84.2 percent of the total being of the oceangoing commercial class.

TOLL RATES

Toll rates are: (a) on merchant vessels, Army and Navy transports, hospital ships, supply ships, and yachts, when carrying passengers or cargo, \$1.83 per net vessel ton of 100 cubic feet of actual earning capacity, as determined in accordance with the "Rules of Measurement of Vessels for the Panama Canal;" (b) on such vessels in ballast, without passengers or cargo, \$1.46 per net vessel ton; and (c) on other floating craft, \$1.02 per ton of displacement.

By treaty, the United States continues to provide to Colombia free transit through the Canal of its troops, materials of war, and ships of war.

BOARD OF DIRECTORS

Ending Fiscal Year 1987

Honorable WILLIAM R. GIANELLI,
Chairman, Board of Directors
Panama Canal Commission
Washington, D.C.

Honorable LUIS A. ANDERSON
Panama, Republic of Panama

Honorable ANDREW E. GIBSON
Short Hills, New Jersey

Honorable RICHARD N. HOLWILL
Deputy Assistant Secretary
Inter-American Affairs
Department of State
Washington, D.C.

Honorable OYDEN ORTEGA
Panama, Republic of Panama

Honorable CARLOS OZORES
Panama, Republic of Panama

Honorable WALTER V. SHEA
Annapolis, Maryland

Honorable CARLOS VELARDE
Panama, Republic of Panama

Honorable WILLIAM W. WATKIN, Jr.
Beaufort, South Carolina

Executive Committee

Honorable WILLIAM R. GIANELLI
Chairman

Honorable OYDEN ORTEGA

Honorable WALTER V. SHEA

Honorable CARLOS VELARDE

Honorable WILLIAM W. WATKIN, Jr.

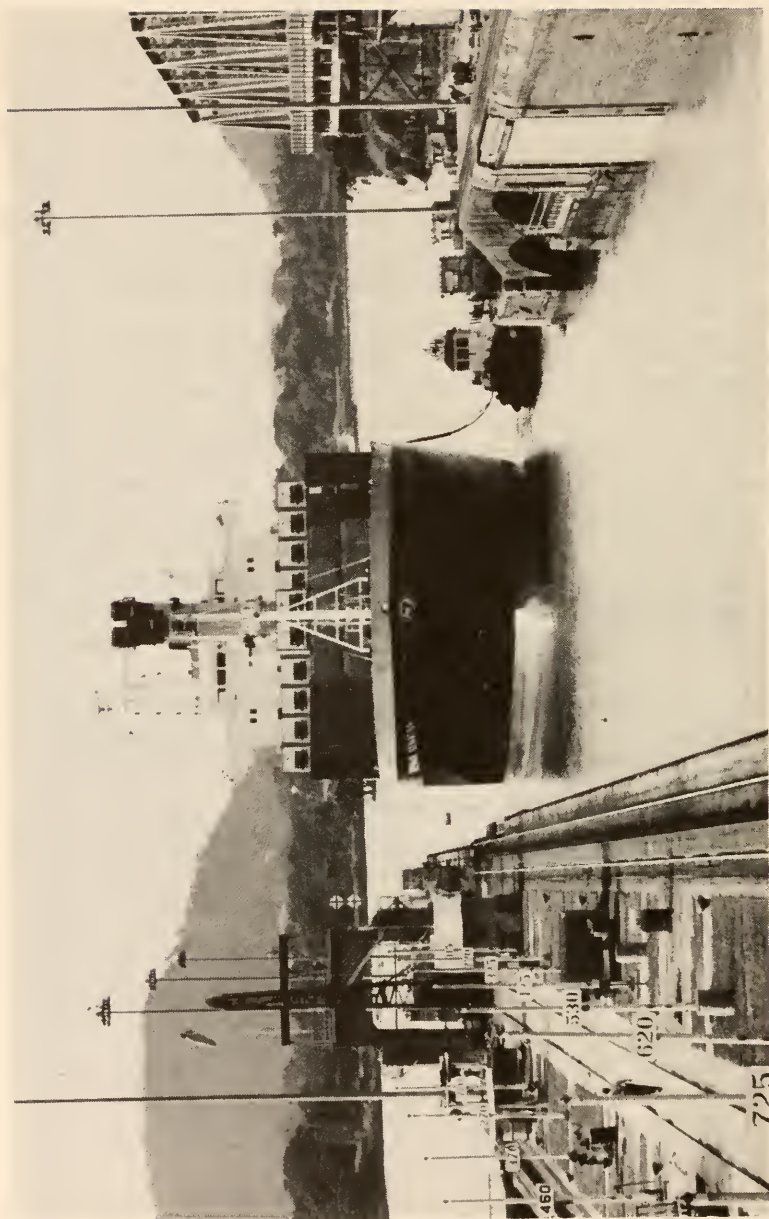
OFFICIALS IN THE REPUBLIC OF PANAMA

Administrator Honorable D. P. MCAULIFFE

Deputy Administrator Honorable FERNANDO MANFREDO, Jr.

OFFICIAL IN WASHINGTON, D.C.

Secretary MICHAEL RHODE, Jr.



The container ship GERMAN SENATOR approaches Miraflores Locks on its maiden voyage inaugurating a new round-the-world container service. This year, 18 million long tons of containerized cargo passed through the Canal reflecting continued strong growth in the movement of containers over the all-water route.

Chapter I

CANAL TRAFFIC

TRAFFIC

Canal traffic and tolls revenue continued upward in fiscal year 1987, although at a more moderate rate than the previous year. Most of the growth resulted from a sharp improvement in corn shipments and moderate gains in a number of other commodities.

Oceangoing transits in fiscal year 1987 increased 2.4 percent to 12,313, or 33.7 vessels daily, from 12,023, or 32.9 daily, the prior year. Commercial vessels accounted for 12,230 of the total oceangoing transits, up from 11,925 in fiscal year 1986. Vessels owned or operated by the U.S. Government and free Colombian and Panamanian Government vessels accounted for 83 transits, compared with 98 last year.

While overall traffic showed growth over the prior year, vessel size remained near 1986 levels. Transits by vessels having beams of 100 feet and over totaled 2,668 compared with 2,627 transits the prior year. As a result, transits in this beam category as a proportion of total oceangoing transits decreased from 21.8 percent in 1986 to 21.7 percent, the first decline in this important traffic element since 1984. Vessels having beams of 80 feet and over accounted for 5,908 transits or 48 percent of total oceangoing transits compared with 5,898 or 49.1 percent in 1986. The lull in vessel size growth was reflected in the average Panama Canal net tonnage of oceangoing commercial vessels, which dropped slightly to 15,248 tons from the record 15,328 tons reached in the prior year.

Total Panama Canal net tonnage increased 2.0 percent to 187.3 million in fiscal year 1987 from 183.8 million tons in the prior year. Correspondingly, tolls revenue rose 2.2 percent to \$329.9 million from the \$322.7 million in 1986.

The high level of traffic was achieved despite a major landslide in Gaillard Cut on October 13, 1986, and persistent political unrest in Panama, which prevailed during the latter part of the fiscal year.

A two year summary of the key elements of Canal traffic and tolls revenue is shown in the following table:

COMPARATIVE HIGHLIGHTS OF OPERATIONS

	<i>Fiscal year</i>	
	1987	1986
Oceangoing transits:		
Commercial	12,230	11,925
U.S. Government	78	85
Free	5	13
Total	<u>12,313</u>	<u>12,023</u>
Daily average	33.7	32.9
Small transits:		
Commercial	852	912
U.S. Government	236	316
Free	43	27
Total	<u>1,131</u>	<u>1,255</u>
Total cargo:		
Commercial	148,693,662	139,948,885
U.S. Government	205,701	176,853
Free	62	80
Total	<u>148,899,425</u>	<u>140,125,818</u>
Total Panama Canal net tons and reconstructed displacement tonnage	187,340,780	183,750,961
Transit revenue:		
Commercial tolls	\$328,463,544	\$321,163,325
U.S. Government tolls	1,395,231	1,570,877
Tolls revenue	<u>\$329,858,775</u>	<u>\$322,734,202</u>
Harbor pilotage, tug, launch, and other services	\$68,128,024	\$67,363,962
Total transit revenue	<u>\$397,986,799</u>	<u>\$390,098,164</u>

COMMODITIES AND TRADE ROUTES

Cargo movements in 1987 registered a fairly high rate of increase with other compared elements of traffic, with total commercial tonnage rising 6.2 percent to 148.7 million long tons from 139.9 million tons in the prior year. This relatively strong performance reflected an improvement in bulk cargoes, particularly grains.

Reversing the declining trend of the prior four years, grain shipments increased 41.1 percent to 32.4 million tons from the 22.9 million tons which passed through the Canal in fiscal year 1986. The increase was mainly fueled by a substantial improvement in corn shipments. Corn tonnage totaled 15.9 million tons, increasing 83.7 percent over the 8.6 million tons shipped via the Canal last year. Nearly 94 percent, or 14.9 million tons, was U.S. corn shipped to the Far East, with Japan receiving 10.7 million tons

and South Korea 2.4 million tons. Other components of the grain commodity group showing improvement included soybeans, which rose from 6.8 million tons to 7.8 million tons; wheat, which was up from 3.8 million tons to 4.5 million tons; and sorghum, which increased from 2.3 million tons to 2.6 million tons. The increased grain tonnage via the Canal reflected an overall recovery in U.S. grain exports generated by a number of factors, including the lower value of the dollar, reduced harvests in other major grain producing nations, and the U.S. Government export enhancement program.

Petroleum and petroleum products decreased 15.9 percent to 25.9 million long tons in fiscal year 1987. The decline in this commodity group was primarily due to a sharp drop in the crude oil movement, which was down to 9 million tons from 12.9 million tons. This drop reflected reduced oil flows from diverse sources, particularly Ecuador. On March 5, 1987, Ecuador was struck by an earthquake which damaged a section of the trans-Ecuadorian pipeline, forcing the country to halt oil exports for about six months. As a result, Ecuadorian oil exports via the Canal totaled 3.5 million tons this year versus the 5.8 million shipped in 1986. The petroleum products segment of this commodity group declined to 17.0 million tons from 17.9 million tons, with most of the reductions concentrated in diesel oil and residual oil shipments.

The nitrates, phosphates and potash commodity group improved significantly to 12.0 million tons from the depressed 9.9 million tons registered in 1986. Phosphates, which accounted for 54.2 percent of the group, rose 23.7 percent to 6.5 million tons from 5.3 million tons. Over 90 percent of phosphates moving via the Canal originated in the U.S. East Coast and were primarily destined for South Korea, Japan and China.

The coal and coke trade continued downward, falling to 7.9 million tons compared with 10.2 million tons in the prior year. Coal exports from the U.S. East Coast accounted for 5.8 million tons, with Taiwan and Japan as the main destinations.

The automobile trade, which generated most of the sharp traffic increases of the prior year, continued strong but did not attain further significant gains. The trade, included in the machinery and equipment group, totaled 2.5 million tons, up slightly from 2.4 million tons. Automobiles from Japan destined for the U.S. East Coast, accounting for 71.4 percent of the trade, totaled 1.8 million tons versus 1.7 million tons in 1986.

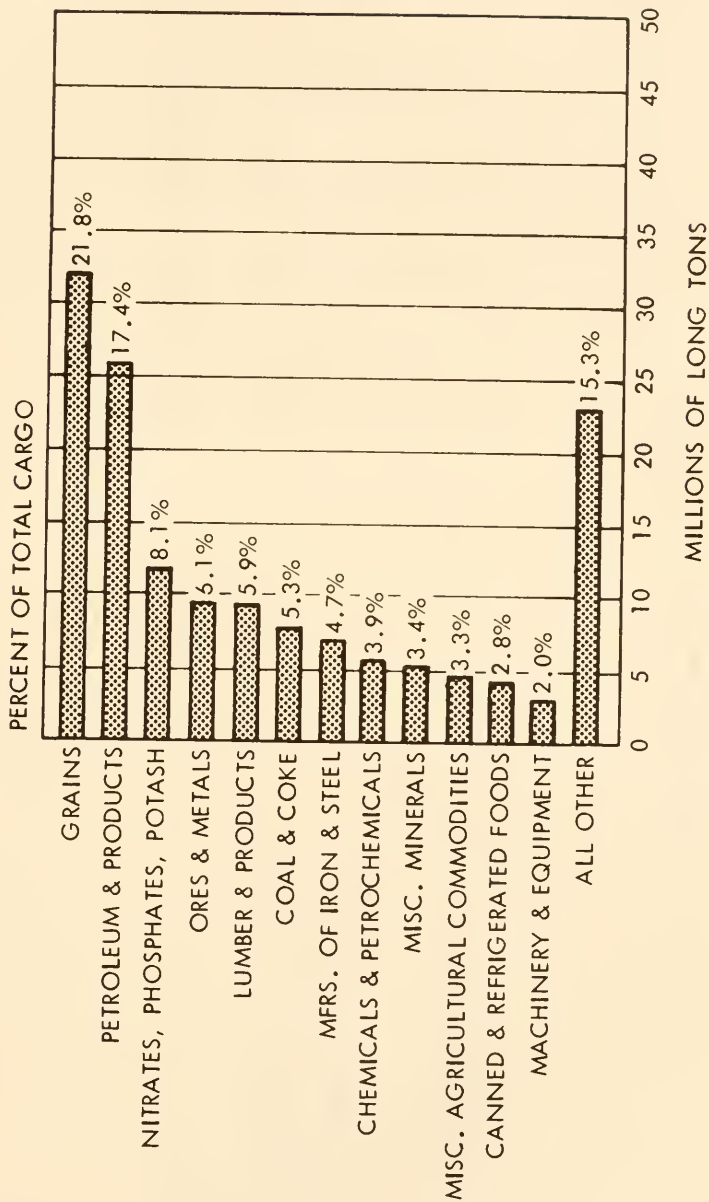
Most other commodity groups, with the exception of ores and metals, showed increases during the year. Fairly high gains were achieved in a number of trades, including refrigerated foods, lumber and products, and containerized cargoes.

Trade between the East Coast United States and Asia remained the leading trade route in Canal traffic, accounting for 39.1 percent of total

Canal commercial cargo. The cargo tonnage carried by ships on this voyage route totaled 58.1 million long tons, up from 50.6 million tons in the prior year.

The following chart and table show the principal commodity groups moving in oceangoing commercial vessels during fiscal year 1987 and a comparison of the major trade routes in fiscal years 1987 and 1986.

PRINCIPAL COMMODITY GROUPS
TRANSITING THE CANAL
OCEANGOING COMMERCIAL CARGO FY 1987



Major Voyage Trade Routes in Canal Traffic

Trade Route	Fiscal year						Percent of Increase or (Decrease)
	1987			1986			
	Panama Canal Net Tons	Long Tons Cargo		Panama Canal Net Tons	Long Tons Cargo		
	[In thousands of tons]						
East Coast United States-Asia	77,471	58,111		71,147	50,583	8.9	14.9
East Coast United States-West Coast South America.....	16,780	12,005		18,261	12,593	(8.1)	(4.7)
Europe-West Coast United States/Canada	14,231	14,850		16,336	16,507	(12.9)	(10.0)
Europe-West Coast South America	10,601	7,375		9,679	6,684	9.5	10.3
Round the World	5,929	3,743		4,257	2,388	39.3	56.7
East Coast Canada-Asia	4,594	3,951		4,545	3,794	1.1	4.1
Europe-Asia.....	4,496	3,700		3,428	1,695	31.2	118.3
U.S. Intercoastal (including Alaska and Hawaii)	4,020	2,879		6,121	4,805	(34.3)	(40.1)
East Coast United States/Canada-Oceania.....	3,983	4,780		3,927	4,501	1.4	6.2
Central America Intercoastal	3,985	3,313		4,733	4,009	(15.8)	(17.4)
South America Intercoastal.....	3,461	2,964		2,473	2,749	40.0	7.8
East Coast United States-West Coast Central America	3,288	2,961		2,684	2,415	22.5	22.6
Subtotal	152,839	120,632		147,591	112,723	3.6	7.0
All other routes.....	33,568	28,058		35,160	27,222	(4.5)	3.1
Total.....	186,407	148,690		182,751	139,945	2.0	6.2



One of four massive 750 ton sea gates, removed during the Miraflores Locks overhaul, is partially lifted from the water by the floating crane HERCULES to allow workmen to seal closure plates. The gate was then floated and towed in barge-like fashion to the Mt. Hope Industrial facility for thorough overhaul. Major maintenance efforts such as this are critical to the effective and efficient operation of the Canal's lockage system.

Chapter II

CANAL OPERATIONS

Canal operations are comprised of Transit Operations and Maintenance and Related Canal Projects. The various functions are divided among the operating bureaus within the Canal agency. On October 1, 1986, the Marine Bureau designated several new divisions and units to handle the functions formerly performed by the Navigation Division, which was dis-established on that date. The organizational chart on page VI reflects the present structure of the Marine Bureau.

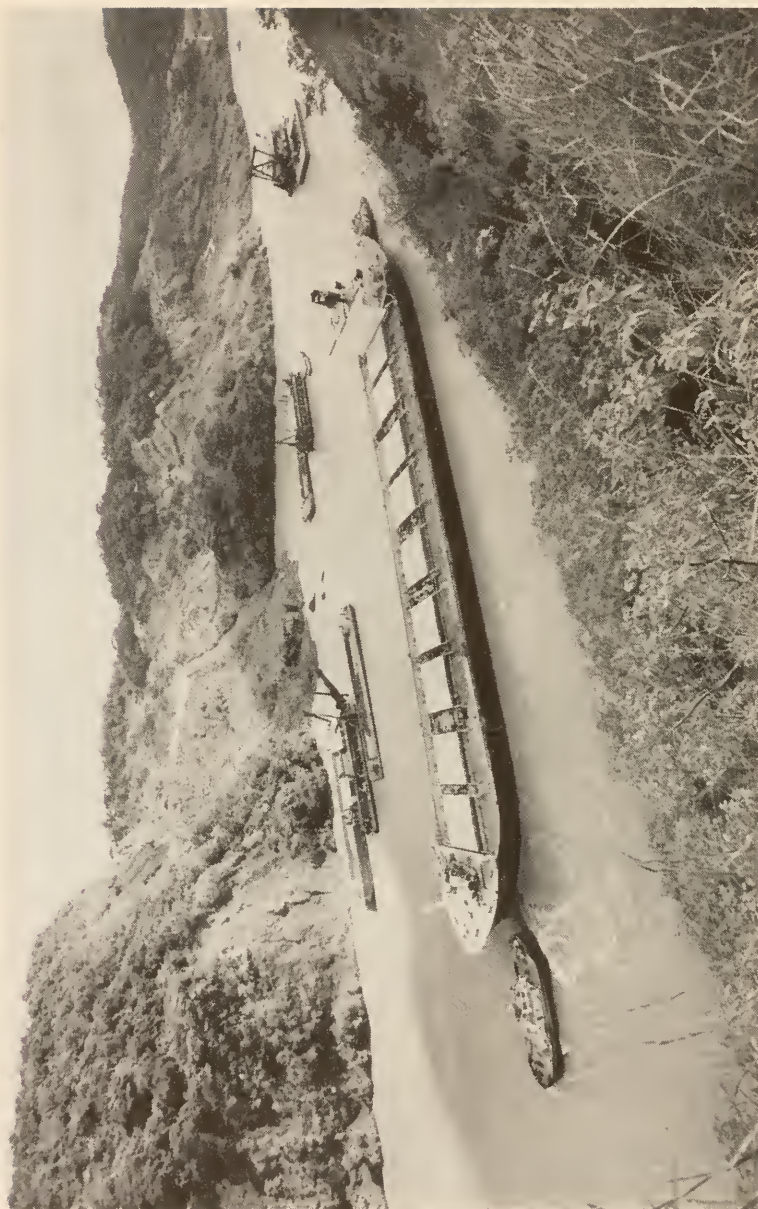
TRANSIT OPERATIONS

Daily average transits by oceangoing vessels increased from the 32.9 per day during fiscal year 1986 to 33.7 per day during fiscal year 1987. Average time in Canal waters increased from 23.4 hours in fiscal year 1986 to 24.0 hours in fiscal year 1987.

<i>Fiscal year</i>	<i>Vessels of 600-foot length and over</i>	<i>Percent of total oceangoing transits</i>	<i>Vessels of 80-foot beam and over</i>	<i>Percent of total oceangoing transits</i>
1987	4,005	32.5	5,902	48.0
1986	4,131	34.4	5,898	49.1
1985	3,862	33.1	5,514	47.3
1984	3,865	33.9	5,496	48.3
1983	4,157	35.1	5,869	49.5
1982	5,534	39.1	7,226	51.1
1981	4,855	34.7	6,364	45.5
1980	4,598	33.8	6,089	44.7

The number of vessels transiting at more than 36-foot drafts increased 16.5 percent during FY 1987 with 1,704 vessels transiting the Canal compared to 1,463 last year. The maximum allowable draft remained at 39 feet 6 inches during the entire fiscal year.

Total jobs performed by Commission tugs increased from 38,833 in fiscal year 1986 to 39,492 in fiscal year 1987.



A PANAMAX size bulk carrier, assisted by Panama Canal tugs, can be seen passing three dredges actively working to remove debris deposited by a major landslide which occurred on October 13, 1986. Full channel width and normal Canal operations were rapidly restored, demonstrating the effective responsiveness of the work force to emergency situations.

	<i>Fiscal year</i>	
	<i>1987</i>	<i>1986</i>
Oceangoing transits	12,313	12,023
Tug jobs:		
Balboa	27,893	26,939
Cristobal	11,599	11,894
Tug operating hours	58,380	60,442

MAINTENANCE AND RELATED CANAL PROJECTS

Maintenance and improvements to the Canal continued at high levels throughout the year. The various divisions and units of the Engineering and Construction Bureau are generally responsible for the overall physical maintenance and improvement of the waterway. The Marine Bureau operates and maintains the locks and related facilities.

During the first quarter of the fiscal year, considerable resources, materials and equipment were dedicated toward cleanup of the major landslide which occurred in Gaillard Cut on October 13, 1986. The slide resulted in approximately one-half million cubic yards of rock, earth and debris flowing into Canal waters. About half of this material was deposited in the shipping lanes, causing a narrowing of the navigable channel in the area of Gold Hill. All available dredging equipment was immediately stationed in the area to begin removal of the slide material. Given the significance of the slide, two dredges and related equipment were contracted from a dredging firm in the United States to assist in the removal project. Efforts were simultaneously undertaken by the Panama Canal Commission to successfully settle unstable areas affected by the slide. Precautionary transit measures temporarily implemented in the interest of navigational safety, were progressively withdrawn until full channel width and normal Canal operations were restored on December 23, 1986.

From January through September, maintenance dredging of the Pacific approach channel was completed to restore maximum channel depth. This project served to remove shoal formations and siltation caused by tidal variations and propellor wash. A similar dredging project is contemplated for the Atlantic approach channel.

A new miter gate lifting device was designed by the Engineering Division and built by the Industrial Division to facilitate removal and installation of miter gates. The device was successfully used during the Miraflores Locks overhaul, wherein Miter Gates Nos. 120, 121, 122, 123, the tallest and heaviest gates in the locks system, were removed for rehabilitation at the Mount Hope Industrial Division. A spare set of gates, refurbished six months in advance of the overhaul, were installed in the east lane of Miraflores Locks while the original gates were reconditioned and shifted to the west lane. The original west lane gates were then rehabilitated and now serve as spare gates.

Several other locks related projects performed during the year involved the replacement of 6,000 linear feet of fendering at the Pacific Locks, rehabilitation of a combined total of some 7,500 linear feet of locomotive tow track, conductor slot and rack sections at all locks, and inspection and maintenance of rising stem and cylindrical valves.

Other significant marine-related maintenance work included major overhauls of the dipper dredge *Christensen*, the tugs *Harding*, *Trinidad*, *Rousseau* and *Parfitt*, and drum gate No. 3 at Madden Dam.

Major equipment acquisitions in support of Canal operations consisted of the delivery of five new towing locomotives increasing the total fleet to 80, the dredge tender *Chagres* which is also capable of assisting with transits, and four aluminum hull pilot/linehandler launches *Xares*, *Umbla*, *Trucha*, and *Albacore II*.

Contracts were awarded for the fabrication of two tractor tugs, the *Guía* and *Líder*, the construction of a tug refueling facility at Miraflores landing, two locomotive cranes incorporating OSHA standards, and the fabrication and delivery of two locomotive turntables for subsequent installation at the north approach walls of Gatun and Miraflores locks respectively.

The second generation Marine Traffic Control computer system continued to undergo upgrading to further improve vessel monitoring and scheduling. This system, as well as other computer systems throughout the Commission, will also benefit from advanced telecommunication capabilities upon installation of a newly acquired telephone exchange system and fiber optic wiring.



The new dredge tender CHAGRES repositions the floating crane GOLIATH. Designed to provide operational support to the Dredging Division, the CHAGRES is equipped with a 3,000 h.p. diesel engine and is capable of assisting with vessel transits.

Chapter III

SUPPORTING OPERATIONS

Supporting operations of the Panama Canal Commission provided essential support services to the operation and maintenance of the waterway and the Agency's facilities, as well as to other U.S. agencies on the Isthmus and to employees and their dependents. These operations included logistical services, community services, sanitation and grounds management, transportation services, public utilities, fire protection, Canal protection, health and safety and other employee services.

LOGISTICAL SERVICES

The Logistical Support Division provided centralized procurement, inventory management, warehousing, distribution, contract administration, and supply and property disposal support to Canal operations. A total of \$72.0 million in goods and services were procured during fiscal year 1987, including \$24.2 million from sources in Panama. Major contracting obligations included approximately \$3.7 million for Bunker "C" fuel oil for thermoelectric power generation, \$4.6 million for light diesel fuel, \$3.5 million for a tractor tugboat, \$2.1 million for vehicles, \$1.6 million for two towing locomotive turntables, \$1.4 million for locomotive cranes and \$1.3 million for a salvage barge.

Approximately \$18 million in Commission inventory items were issued for Commission use, and \$21.2 million was obligated for new inventory purchases during the year. A total inventory of 38,734 line items with an average cost value of \$28.7 million was on hand at year end.

Activities of the Excess Disposal Branch included no-cost transfers to other U.S. Government agencies of excess equipment having an original acquisition value of approximately \$879,225, while surplus property sold to the Government of Panama at current fair market value amounted to approximately \$92,244.

The New Orleans Branch in Louisiana expedited urgent purchases and

coordinated all Commission cargo shipments from the United States to Panama. Under the coverage of the Military Sealift Command's contract, 12,326 measurement tons of containerized and breakbulk cargo were shipped to the Port of Balboa. An additional 5,274 measurement tons of general cargo and vehicles were shipped under commercial contract with an ocean freight shipper from New Orleans to the Republic of Panama.

COMMUNITY SERVICES

The Community Services Division is responsible for managing employee housing, Commission-owned buildings, a technical resource center (library) and the employee fitness program for the agency. Other services are provided by the Office of Area Coordination.

The Housing Management Branch utilized Commission and contract forces to maintain and repair its quarters inventory, with a strong emphasis on safety and security upgrades. The agency continued its multiyear housing management plan designed to concentrate resources on diminishing housing requirements in selected areas. Implementation of the plan is intended to utilize remaining housing and related maintenance resources in the most cost-effective manner, while at the same time preserving optimum housing for eligible employees and meeting ongoing responsibilities under the Panama Canal Treaty. Under these criteria, 56 housing units located in Balboa, Gamboa and Margarita were transferred to the Government of Panama. By the end of the fiscal year, the Commission retained 1,573 housing units, representing 37% of the inventory of approximately 4,300 units owned by the Panama Canal Company immediately prior to entry into force of the Panama Canal Treaty in 1979.

The Buildings Management Branch maintains and operates Commission buildings and structures not specifically assigned to other Commission units, a centralized custodial service and the agency's moves and relocations. This unit was designated as the agency space manager responsible for implementing and managing Executive Order 12411 and other regulations. The branch managed major renovations at four buildings and is actively engaged in the implementation of energy conservation programs.

The Technical Resources Center (library) provided mission-support information and research to all units of the Commission, other U.S. agencies, the Government of Panama and maintained a collection of library and three-dimensional materials relating to the history and operation of the Panama Canal. By September 30, 1987, this unit had relocated from Building 0610, Ancon, to Building 38, Balboa.

The Employee Fitness Branch provides comprehensive fitness programs for Commission employees and manages a variety of recreational areas used by employees and their dependents. The branch also provides services to the Commission such as certifying all job applicants and employees

required to be proficient in swimming, instructing employees from various divisions (i.e. Canal Protection, Fire, Dredging, Apprentice School, Locks, etc.) in basic rescue and water safety, advanced lifesaving, drown-proofing, survival floating and water safety instructor's courses.

SANITATION AND GROUNDS

Mosquito control and other environmental health measures essential to maintain a high level of health of employees were carried out by the Sanitation Branch. Surveillance and control of biting insects and vermin capable of transmitting disease were continued, with emphasis on non-chemical control methods such as drainage maintenance in lieu of extensive dispersements of chemical insecticides. Some 220 miles of surface water drainage ditches were maintained to eliminate mosquito breeding around employee work and housing areas. Specialized mosquito control measures continue to be necessary for the prevention of such major insect-borne tropical diseases as malaria, yellow fever, and dengue. Additional control efforts were directed against cockroaches, houseflies, bats, rats, venomous snakes and other vermin.

Approximately 2,900 acres of improved grounds were maintained within and around Commission residential areas, buildings, the locks and industrial facilities. Vegetation control was maintained by Grounds Branch crews along utility line rights-of-way, earthen saddle dams, Gatun Dam, Canal bank stability drainage systems, and around the perimeters of aids to navigation towers and targets.

Following the major landslide in Gaillard Cut, referred to on page 15 of this report, Grounds and Sanitation workers participated in soil stabilization of the area by dispersing lime on the water saturated soil at the slide sites. Later, slopes of Gold Hill were planted with 4,700 tree seedlings of the *Gmelina—arborea* and *Acacia—magnium* species to reforest the area of the landslide and increase bank stability.

Africanized bee control operations remained stable in FY 1987 with 173 bee swarms and nests destroyed by Commission bee control teams. Four Africanized bee swarms were removed from transiting ships in FY 1987.

TRANSPORTATION SERVICES

The Motor Transportation Division operated and maintained a consolidated motor pool of 884 vehicles designed to meet the vehicular transportation requirements of the Commission. The vehicle fleet in fiscal year 1987 included 633 trucks of various types, 208 passenger-carrying vehicles, and 43 special-purpose vehicles. Vehicle mileage decreased slightly from 7,187,895 miles in fiscal year 1986 to 7,112,193 miles in FY 1987. Fully equipped shops, including a tire retreading facility and heavy duty repair shops, provided facilities for overhauls, maintenance and repairs to the Motor Transportation Division fleet and equipment of other Commission units. In addition, some services were contracted out where they were

available in required quantity and quality in Panama. The vehicle inspection facility located within the Motor Transportation Division, Ancon area garage, also was used by the Government of Panama during the first six months of the fiscal year to conduct inspections of privately-owned vehicles and by the Motor Transportation Division to perform Commission vehicle inspections.

PUBLIC UTILITIES AND ENERGY

Panama Canal Commission facilities include electric power generation and distribution systems, communication systems, water purification and distribution systems, and a central chilled water air conditioning system for certain public buildings.

Total Canal area energy demand during fiscal year 1987 was 518 gigawatt hours, a 8.1 percent increase from the 479 gigawatts used last year. The peak hourly demand of 84 megawatts reached on September 28, 1987, was 2.4 percent above the peak of 82 megawatts in the prior year. Agency-directed energy consumption in fiscal year 1987 for electrical power and fuel, calculated together in Btu's, was reduced a total of 17.9 percent in relation to the fiscal year 1975 baseline established by the Federal Energy Management Program. Electrical power consumption by the Commission, 76.3 gigawatt hours, was 2.6 percent above the usage levels recorded for comparable operations in fiscal year 1975; fuel consumption, excluding fuel for power generation, 5.0 million gallons, was 34.9 percent below the corresponding 1975 fiscal year baselines.

The water treatment and distribution systems operated by the Commission provide potable water for the Canal area and areas of the Republic of Panama. The Pacific side system serves the Canal area, portions of Panama City, and suburban areas; and the separate Atlantic side system serves the Canal area, portions of Colon, and suburban areas. During fiscal year 1987, the two systems supplied 3.11 billion cubic feet of potable water to consumers, an increase of about 2.64 percent from the previous year. Water supplied by the Panama Canal Commission to Panama City and Colon metropolitan areas amounted to approximately 55.4 million gallons per day.

FIRE PROTECTION

The Panama Canal Commission Fire Division and the Bomberos, Republic of Panama, in accordance with the Panama Canal Treaty of 1977, are responsible for providing fire protection, firefighting, and rescue operations in Canal operating areas, defense sites, civilian and military areas of coordination and shipboard firefighting on all vessels in Canal area waters.

The total number of responses for fiscal year 1987 were 5,748 compared to 5,804 for fiscal year 1986. About 43 percent of the responses for this year were attributable to a marine standby program initiated during the last

quarter of fiscal year 1985. Under this program, Fire Division personnel respond with foam apparatus on standby at the locks for certain vessels identified by the Marine Bureau as transporting hazardous or flammable cargoes, particularly during the critical period when a vessel is entering the locks.

Requests for ambulance service increased from 1,366 last year to 1,476 this year. Bomb threats also increased from 15 last year to 31 this year. Excluding ship fires, there were 517 fires during the year. As in the past, the vast majority of these incidents were grass and brush fires, most frequently occurring during the vulnerable dry season period. Additional Fire Division statistics appear in Table 16 on page 120 of this report.

CANAL PROTECTION

The Canal Protection Division provides operational security for the Panama Canal Commission and plant protection of installations and facilities devoted to the management, operation, and maintenance of the waterway. Security improvements to vital installations and support activities continued throughout the year with site surveys, inspection of facilities and installation of essential security hardware/systems. Recruitment of in-service employees into upward mobility program guard positions continued heavy during the year to meet the increased coverage requirements.

HEALTH AND SAFETY

The Occupational Health Division and the Safety Division are components of the Office of Personnel Administration. The Personnel Director is the Designated Agency Safety and Health Official. The Panama Canal Commission is committed to ensuring a safe and healthful workplace for its employees, an objective which enjoys support from top management down.

During fiscal year 1987, the Commission experienced 628 performance-of-duty accidents/illnesses for which employees required medical attention beyond first aid, as compared to 598 such accidents/illnesses in fiscal year 1986. The incident rate rose slightly from 7.5 in fiscal year 1986 to 7.9 per 100 employees in fiscal year 1987. There were no fatalities recorded in either fiscal year 1987 or fiscal year 1986.

As a means of enhancing safety and health in the Commission workplace during fiscal year 1987, on- and off-Isthmus training was increased, workplace inspections and evaluations were intensified, ongoing publicity was accomplished, and a safety incentive awards program was revitalized to recognize safe workers and foster positive safety attitudes. A Dive Safety Board was established to recommend improved safety and technical standards and procedures in dive operations. Also, controlled alcohol and drug testing procedures were continued as a means to further ensure a safe working environment. In addition, the certified Safety and Health Committee continued its active role in the safety and health program.

Chapter IV

ADMINISTRATION AND STAFF

PERSONNEL

FORCE EMPLOYED AND PAYROLL

At the end of fiscal year 1987, the total Isthmian force of the Commission was 8,562 compared to 8,338 employees in fiscal year 1986. Of the total Isthmian force, 7,561 were permanent and 1,001 temporary. Of the permanent work force, 6,269 (82.9%) were Panamanians, 1,151 (15.2%) were U.S. citizens and 141 (1.9%) were third-country nationals. Nineteen persons, all U.S. citizens, were employed by the Commission in New Orleans and Washington, D.C.

The total Commission payroll was \$196.2 million in fiscal year 1987 compared to \$190.8 million in fiscal year 1986. Of the total Commission fiscal year 1987 payroll, \$133.6 million was paid to non-U.S. citizen employees and \$62.6 million to U.S. citizen employees.

EQUAL OPPORTUNITY PROGRAM

The new Multi-Year Affirmative Action Plan covering fiscal years 1988 through 1992 for this agency was initiated in fiscal year 1987. The Affirmative Action Accomplishment Report for fiscal year 1987 indicated that the agency met its stated affirmative action goals and exceeded its employment goal for the severely handicapped.

Formal EO complaints filed remained at the same level as the previous fiscal year. Under an ongoing educational program, several workshops were conducted on sexual harassment, and the EEO complaint process. Special emphasis program activities included commemorations of National Employ the Handicapped Week, Black History Week, National Hispanic Heritage Week, and Women's Week. Ongoing monitoring of the Panamanian Preference Program reflected continued increasing participa-

tion of Panamanian nationals at all levels. At the end of fiscal year 1987, the composition of the work force by sex and minority group designation was as follows:

By sex				
Male				88.6%
Female				11.0%
By Minority Group Designation				
<i>Hispanics</i>	<i>Blacks</i>	<i>Whites</i>	<i>Oriental</i> s	<i>Amer. Ind.</i>
61.7%	23.9%	12.8%	1.3%	0.3%

PUBLIC AFFAIRS

The Office of Public Affairs is responsible for handling all public affairs, guide services and informational activities of the Panama Canal Commission, both locally and internationally. In this connection, through the Commission publication *Spillway*, local press releases, video tapes, films and exhibits, matters of related interest were disseminated to the work force and the public at large. The Graphic Branch assisted in the accomplishment of this task by providing a broad range of photographic and audio-visual support services. Such support included the development of exhibits for international shipping exhibitions and conferences like Expoship 87 in London and the Seatrade Cruise Shipping Conference in Miami, and audio visual assistance for engagements where key agency officials served as guest speakers. Similar support was provided for Commission exhibits at the annual regional fair held in David; Expocomer, an international exhibition held in Panama City; a display commemorating the Bicentennial of the U.S. Constitution; and a photographic display featuring the work of Canal construction day photographer Ernest Hallen. English and Spanish language press releases, films, video and audio tape segments were also developed for internal agency use and for distribution to the press services.

The landslide in Gaillard Cut and political events in Panama placed greater than usual demands on the office to provide local and international media representatives with information on the Canal under various formats.

The guide service handled a total of 305,416 visitors at the Canal and conducted 680 VIP tours. Visitors included representatives of major news services, officials from various sectors of the shipping industry and shipping related publications, and government and business officials from around the world.

OMBUDSMAN

The Office of the Ombudsman was established pursuant to implementing legislation of the Panama Canal Treaty of 1977. The office responds to employees and dependents' complaints, grievances, and requests for

information; and channels many issues to the proper authorities for processing under existing statutes or administrative regulations. Generally, the Office of the Ombudsman investigates administrative problems, inefficiencies, omissions and policy conflicts existing within the Panama Canal Commission and other U.S. Government agencies on the Isthmus of Panama resulting from the Treaty. However, the office provides the widest latitude possible for handling problems affecting employee morale and the quality of life.

During fiscal year 1987, there was marked increase in telephone traffic, particularly during the last quarter. Much of the increase was attributable to heightened concerns of Canal area employees and residents fueled by ongoing political unrest in Panama. A "hotline" was activated to more effectively handle the high volume of calls.

A total of 275 cases were processed by the Ombudsman as compared to 264 cases in FY 1986. A number of complaints continue to flow from the progressive deterioration and lack of maintenance of highways, streets and railroad crossings within the Canal Area, which are outside the responsibility of the Panama Canal Commission.

INDUSTRIAL RELATIONS

During the past year, contract administration activities continued routinely. Efforts to promote more constructive and harmonious labor relations have resulted in an increased willingness on the part of management officials to meet with union representatives to discuss changes in the work place and attempt resolution of disputes without resort to third parties.

The collective bargaining agreement with Local No. 13, International Association of Firefighters, was extended for an additional year, until April of 1988. The agreement with the Professional Bargaining Unit, represented by the Maritime/Metal Trades Council, was extended for three more years.

The Commission was one of several U.S. Federal agencies directly affected by a landmark decision of the Federal Labor Relations Authority (FLRA) which held that union proposals concerning pay and fringe benefits are not intrinsically non-negotiable. The FLRA ruled in four cases involving the Commission that eleven such union proposals were negotiable. Negotiations are pending.

GENERAL COUNSEL

On December 23, 1985, the President signed into law the Panama Canal Amendments Act, Public Law 99-209, which authorized the Panama Canal Commission to settle all vessel-accident claims, regardless of the amount and irrespective of the site of the accident. Prior to the enactment of this Act, the Commission was precluded from considering claims of more than \$120,000 for out-of-locks accidents. At the time of the passage

of the Panama Canal Amendments Act, 30 out-of-locks vessel-accident claims had been filed and were pending, with either the United States Congress or the Commission. Since the enactment of the Amendments Act, the Commission has steadily reduced this backlog of vessel-accident claims. By the end of fiscal year 1987, 24 of these claims had been settled, and \$15,702,367 (out of a total of \$21,266,200 claimed) had been paid to the aggrieved shipowners.

Two lawsuits for out-of-locks vessel-accident damage were filed before the passage of the Amendments Act and an additional seven were filed after its enactment. By September 30, 1987, one case had been dismissed by the Court, while six suits have been settled out of court for a total payment of \$2,084,899.

In fiscal year 1987, one phase of litigation arising from the termination of a contract for the purchase of a tugboat was successfully completed. The litigation concerned the Commission's termination for default of a contract with a New England builder for the construction of the tugboat *Paz*. The contract was terminated in August 1984 when the contractor failed to make timely delivery of the tug. In the ensuing litigation in the Claims Court, the contractor demanded \$1.9 million in damages, and the Canal Commission counterclaimed for approximately \$750,000. The Claims Court in June 1986 denied the contractor's claim and granted judgement in favor of the Commission on its counterclaim. This decision was affirmed by the U.S. Court of Appeals for the Federal Circuit on February 2, 1987.

Chapter V

FINANCIAL REPORT

FINANCIAL STATEMENTS FOR THE FISCAL YEAR ENDED SEPTEMBER 30, 1987

The financial statements of the Panama Canal Commission, appearing as Tables 1 through 6, with accompanying notes, present the financial position of the Commission at September 30, 1987, and the results of its operations for the fiscal year then ended.

The accounts and statements of the Panama Canal Commission have been examined by the Office of General Auditor of the Commission and by the United States General Accounting Office. Detailed audit reports of the United States General Accounting Office are directed to the Congress and are presented as Congressional documents.

Summary information concerning operating results and capital expenditures follows:

RESULTS OF OPERATIONS

Net loss from operations amounted to \$0.6 million. This amount will be recovered from subsequent revenues as required by section 1341(b)(2) of the Panama Canal Act of 1979 (Public Law 96-70).

CAPITAL EXPENDITURES

Accrued capital expenditures for fiscal year 1987 amounted to \$29.0 million. The principal expenditures were \$3.2 million for purchase of a tugboat, \$2.4 million for replacement of a dredge tender, \$2.2 million for replacement of motor vehicles, \$2.1 million for purchase of five towing locomotives, \$1.6 million for purchase of four new launches, \$1.5 million for improvements to Commission buildings, \$1.4 million for replacement of the Commission's telephone system, \$0.6 million for purchase of a locomotive turntable at Gatun Locks, and \$0.6 million for improvements to the electrical power system.

Table 1.—Statement of Financial Position

Assets	1987	1986
PROPERTY, PLANT AND EQUIPMENT:		
At cost (Note 1c)	\$915,595,874	\$891,030,194
Less accumulated depreciation and valuation allowances (Notes 1e and 2)	<u>447,025,403</u>	<u>427,840,218</u>
	<u>468,570,471</u>	<u>463,189,976</u>
CURRENT ASSETS:		
Cash and Fund balances (Notes 3 and 4):		
Deposit funds and undeposited receipts:		
Postal fund	134,738	140,954
Trust fund	1,214,518	1,122,442
Cash receipts for deposit into U.S. Treasury ...	<u>1,088,115</u>	<u>579,276</u>
	<u>2,437,371</u>	<u>1,842,672</u>
Unexpended appropriated funds:		
Operating funds	55,658,038	75,776,159
Capital funds	26,086,026	30,367,019
Emergency fund	<u>10,000,000</u>	<u>10,000,000</u>
	<u>91,744,064</u>	<u>116,143,178</u>
	<u>94,181,435</u>	<u>117,985,850</u>
Accounts receivable	<u>9,760,924</u>	<u>9,956,099</u>
Inventories, less allowance for obsolete and excess stock of \$532,268 and \$401,972, respectively (Note 1g)	<u>35,139,169</u>	<u>34,452,692</u>
Other current assets	<u>1,887,373</u>	<u>1,868,675</u>
	<u>140,968,901</u>	<u>164,263,316</u>
OTHER ASSETS:		
Deferred charges:		
Cost of early retirement benefits (Note 1h)	234,720,000	254,280,000
Cost of work injuries compensation benefits (Notes 1m, 7 and 8a)	50,344,000	.....
Retirement benefits to certain former employees of predecessor agencies (Note 1h)	<u>6,628,000</u>	<u>7,599,000</u>
	<u>291,692,000</u>	<u>261,879,000</u>
Unrecovered costs due from subsequent revenues (Notes 1b and 5)	<u>590,424</u>	<u>.....</u>
	<u>292,282,424</u>	<u>261,879,000</u>
TOTAL ASSETS	<u><u>\$901,821,796</u></u>	<u><u>\$889,332,292</u></u>

The accompanying notes are an integral part of this statement.

September 30, 1987 and 1986

Capital and Liabilities	1987	1986
CAPITAL:		
Investment of the United States Government:		
Interest-bearing (10.756% and 11.033%, respectively) (Notes 8c and 9)	\$64,711,276	\$49,803,121
Non-interest-bearing	287,336,291	287,909,798
	<u>352,047,567</u>	<u>337,712,919</u>
Unexpended appropriations (Note 3):		
Obligated operating funds	55,658,038	75,776,159
Obligated capital funds	23,779,004	21,196,656
Unobligated capital funds	2,307,022	9,170,363
Unobligated emergency fund	10,000,000	10,000,000
	<u>91,744,064</u>	<u>116,143,178</u>
	<u>443,791,631</u>	<u>453,856,097</u>
CURRENT LIABILITIES:		
Accounts payable:		
U.S. Government agencies	4,752,021	5,119,155
Government of Panama	6,942,830	6,574,365
Other	10,490,935	11,989,470
	<u>22,185,786</u>	<u>23,682,990</u>
Accrued liabilities:		
Employees' leave	43,808,225	41,845,798
Salaries and wages	6,643,633	5,856,533
Cost of early retirement benefits (Note 1h)	19,560,000	19,560,000
Retirement benefits to certain former employees of predecessor agencies (Note 1h)	917,000	1,017,000
Employees' repatriation	613,000	930,000
Marine accident claims (Note 8d)	10,296,755	26,485,284
Net revenue payable to Government of Panama (Note 6)		2,012,762
Other	1,889,633	2,262,308
	<u>83,728,246</u>	<u>99,969,685</u>
Other current liabilities:		
Advances for capital-unexpended (Notes 1d and 10) ...	16,316,050	16,435,985
Other	1,109,701	1,294,778
	<u>17,425,751</u>	<u>17,730,763</u>
	<u>123,339,783</u>	<u>141,383,438</u>
DEFERRED CREDIT:		
Advances for capital being amortized (Notes 1d and 9)	32,517,416	28,185,316
LONG-TERM LIABILITIES AND RESERVES:		
Cost of early retirement benefits (Note 1h)	215,160,000	234,720,000
Cost of work injuries compensation benefits (Notes 1m, 7 and 8a)	50,344,000	.....
Retirement benefits to certain former employees of predecessor agencies (Note 1h)	5,711,000	6,582,000
Employees' repatriation	6,391,000	6,528,000
Lock overhauls (Note 1i)	1,524,156	3,219,734
Marine accidents (Note 1j)	20,516,706	12,452,991
Casualty losses (Note 1j)	877,771	841,679
Floating equipment overhaul (Note 1k)	1,648,333	1,563,037
	<u>302,172,966</u>	<u>265,907,441</u>
TOTAL CAPITAL AND LIABILITIES	<u>\$901,821,796</u>	<u>\$889,332,292</u>

The accompanying notes are an integral part of this statement.

**Table 2.—Statement of Operations and Non-Interest-Bearing Investment
Fiscal Years Ended September 30, 1987 and 1986**

	1987	1986
OPERATING REVENUES:		
Tolls Revenue (Note 8b)	\$329,858,775	\$319,643,202
Other Revenues (Note 8b)	<u>106,275,461</u>	<u>104,658,022</u>
Total operating revenues	<u>436,134,236</u>	<u>424,301,224</u>
OPERATING EXPENSES:		
Payments to the Government of Panama:		
Public services	10,000,000	10,000,000
Fixed annuity	10,000,000	10,000,000
Tonnage	<u>58,072,944</u>	<u>56,959,549</u>
	78,072,944	76,959,549
Maintenance of channels and harbors	49,264,895	40,256,410
Navigation service and control	73,257,348	70,835,092
Locks operation	46,527,859	49,260,120
General repair, engineering and maintenance services	23,970,536	21,689,776
Supply and logistics	18,858,026	17,909,207
Utilities	30,181,152	31,783,509
Housing operations	6,380,002	4,940,672
General and administrative	69,234,014	66,487,315
Interest on interest-bearing investment (Notes 8c and 9)	6,944,752	6,786,828
Other	<u>34,033,132</u>	<u>35,379,984</u>
Total operating expenses	<u>436,724,660</u>	<u>422,288,462</u>
NET OPERATING REVENUE (LOSS) (Notes 1b, 5 and 6)	(590,424)	2,012,762
INVESTED CAPITAL-NON-INTEREST-BEARING:		
Unrecovered costs due from subsequent revenues (Notes 1b and 5)	590,424	.....
Net revenue payable to Government of Panama (Note 6) .....	.....	(2,012,762)
Investment at beginning of fiscal year	287,909,798	286,084,032
Miscellaneous receipts deposited into the U.S Treasury	579,276	456,513
Due U.S. Treasury for undeposited receipts	(1,088,115)	(579,276)
Interest on interest-bearing investment (Notes 8c and 9)	<u>(64,668)</u>	<u>1,948,529</u>
INVESTED CAPITAL-NON-INTEREST-BEARING AT END OF FISCAL YEAR	<u>\$287,336,291</u>	<u>\$287,909,798</u>

The accompanying notes are an integral part of this statement.

Table 3B—Statement of Changes in the Investment of the United States Government
Fiscal Year Ended September 30, 1986

	Invested Capital						
	Interest-Bearing	Non-Interest-Bearing	Emergency Fund	Operating Funds	Capital Funds	Total	
INVESTMENT AT OCTOBER 1, 1985	\$76,901,053	\$286,084,032	\$10,000,000	\$43,357,867	\$24,605,692	\$440,948,644	
Appropriation by the Congress for FY 1986 .....	.....	.....	.....	418,584,000	25,500,000	444,084,000	
Appropriation Public Law 99-195 (indefinite-funded interest) .....	.....	.....	.....	6,450,000	.....	6,450,000	
	<u>76,901,053</u>	<u>286,084,032</u>	<u>10,000,000</u>	<u>468,391,867</u>	<u>50,105,692</u>	<u>891,482,644</u>	
INCREASES IN INVESTMENT:							
Prior year receipts deposited into the U.S. Treasury .....	.....	456,513	.....	.....	.....	456,513	
Expenditures from capital appropriations	19,738,673	.....	.....	.....	(19,738,673)	.....	
Expenditures from operating appropriations	392,080,587	.....	.....	(392,080,587)	.....	.....	
Interest on interest-bearing investment .....	.....	1,948,529	.....	.....	.....	1,948,529	
Net revenue (Note 6) .....	.....	2,012,762	.....	.....	.....	2,012,762	
	<u>411,819,260</u>	<u>4,417,804</u>	.....	<u>(392,080,587)</u>	<u>(19,738,673)</u>	<u>4,417,804</u>	
DECREASES IN INVESTMENT:							
Funds to be covered into the U.S. Treasury .....	.....	.....	.....	.....	.....	.....	
Receipts deposited into the U.S. Treasury	436,961,276	.....	.....	535,121	.....	535,121	
Due U.S. Treasury for undeposited receipts .....	.....	579,276	.....	.....	.....	436,961,276	
Property transferred to the Government of Panama	1,948,292	.....	.....	.....	.....	579,276	
Property transferred to other U.S. Government agencies	7,624	.....	.....	.....	.....	1,948,292	
Net revenue payable to the Government of Panama (Note 6) .....	.....	2,012,762	.....	.....	.....	7,624	
	<u>438,917,192</u>	<u>2,592,038</u>	.....	<u>535,121</u>	.....	<u>2,012,762</u>	
INVESTMENT AT SEPTEMBER 30, 1986	<u>\$49,803,121</u>	<u>\$287,909,798</u>	<u>\$10,000,000</u>	<u>\$75,776,159</u>	<u>\$30,367,019</u>	<u>\$453,856,097</u>	
	(Notes 8c and 9)						

The accompanying notes are an integral part of this statement.

Table 4.—Statement of Changes in Financial Position
Fiscal Years Ended September 30, 1987 and 1986

SOURCE OF FUNDS:	1987	1986
From Operations:		
Revenue	\$436,134,236	\$424,301,224
Less operating expenses:		
Interest on interest-bearing investment	6,944,752	6,786,828
Payments to the Government of Panama ...	78,072,944	76,959,549
Other expenses	351,706,964	338,542,085
Total operating expenses	436,724,660	422,288,462
Net operating revenue (loss)		
(Notes 1b, 5 and 6)	(590,424)	2,012,762
Unrecovered costs due from subsequent revenues		
(Notes 1b and 5)	590,424	.....
Net revenue payable to Government of Panama		
(Note 6) .....	.....	(2,012,762)
Add transactions not requiring outlay of funds:		
Depreciation (Notes 1d, 1e and 10)	20,827,542	22,587,367
Provision for lock overhauls (Note 1i)	4,333,000	4,141,000
Provision for casualty losses (Note 1j)	5,226,464	5,200,000
Provision for floating equipment overhaul		
(Note 1k)	3,305,000	2,500,000
Other	5,329,995	2,055,856
	39,022,001	36,484,223
Change in investment of the U.S. Government:		
Interest on interest-bearing investment		
(Notes 8c and 9)	(64,668)	1,948,529
Receipts deposited into U.S. Treasury	(441,233,422)	(436,961,276)
Disbursements from appropriated funds	456,448,815	411,819,260
Net property transfers	(307,238)	(1,955,916)
Other	(508,839)	(122,763)
	14,334,648	(25,272,166)
Advances for capital utilized (including transit		
booking fees) (Notes 1d and 10)	5,968,896	3,623,694
Total source of funds	59,325,545	14,835,751
APPLICATION OF FUNDS:		
Lock overhauls expenditures	6,028,578	3,717,913
Casualty losses expenditures	1,917,360	5,704,238
Accrued capital expenditures	29,011,549	19,853,012
Floating equipment overhaul expenditures	3,219,705	3,322,565
Total application of funds	40,177,192	32,597,728
INCREASE (DECREASE) IN WORKING CAPITAL...	\$ 19,148,353	\$(17,761,977)
ANALYSIS OF CHANGES IN WORKING CAPITAL:		
Increase (decrease) in current assets:		
Cash	\$594,699	\$67,666
Receivables	(195,174)	(2,181,713)
Inventories	686,477	(6,242,340)
Other	18,698	1,468,109
	1,104,700	(6,888,278)
Decrease (increase) in current liabilities:		
Accounts payable	1,497,204	(3,338,382)
Accrued liabilities	16,241,438	(23,659,260)
Other current liabilities	305,011	16,123,943
	18,043,653	(10,873,699)
INCREASE (DECREASE) IN WORKING CAPITAL...	\$19,148,353	(17,761,977)

The accompanying notes are an integral part of this statement.

**Table 5.—Statement of Status of Appropriations
Fiscal Years Ended September 30, 1987 and 1986**

	1987	1986
SOURCE OF APPROPRIATIONS:		
Operating funds:		
Current year operating appropriation	\$414,783,000	\$418,584,000
Appropriation Public Law 99-195 (indefinite-funded interest)	<u>7,000,000</u>	<u>6,450,000</u>
	<u>421,783,000</u>	<u>425,034,000</u>
 Obligated operating funds brought forward:		
Fiscal year 1980	674,235	713,275
Fiscal years—Merged	9,215,292	3,687,150
Fiscal year 1984 .....	.....	3,197,827
Fiscal year 1985	5,525,096	35,759,615
Fiscal year 1986	<u>60,361,536</u>	<u>.....</u>
	<u>75,776,159</u>	<u>43,357,867</u>
	<u>497,559,159</u>	<u>468,391,867</u>
 Capital funds:		
Current year capital appropriation (no year)	<u>24,403,000</u>	<u>25,500,000</u>
 Obligated capital funds brought forward:		
Fiscal year 1980	20,908	124,574
Fiscal years 1981 through 1985 .....	.....	15,107,899
Fiscal years 1981 through 1986	<u>21,175,748</u>	<u>.....</u>
	<u>21,196,656</u>	<u>15,232,473</u>
 Unobligated capital funds brought forward (no year)		
Fiscal year 1980	30,997	53,346
Fiscal years 1981 through 1985 .....	.....	9,319,873
Fiscal years 1981 through 1986	<u>9,139,366</u>	<u>.....</u>
	<u>9,170,363</u>	<u>9,373,219</u>
	<u>54,770,019</u>	<u>50,105,692</u>
 Emergency fund (no year)	<u>10,000,000</u>	<u>10,000,000</u>
 TOTAL SOURCE OF APPROPRIATIONS	<u><u>\$562,329,178</u></u>	<u><u>\$528,497,559</u></u>

The accompanying notes are an integral part of this statement.

Statement of Status of Appropriations
Fiscal Years Ended September 30, 1987 and 1986

APPLICATION OF APPROPRIATIONS:

1987

1986

Operating funds:

Expenditures from operating appropriations:

Fiscal year 1980	\$362,500	\$4,111
Fiscal years—Merged	2,316,168	507,114
Fiscal year 1984 .....	.....	1,317,197
Fiscal year 1985	2,011,226	31,588,926
Fiscal year 1986	52,852,454	358,663,239
Fiscal year 1987	<u>370,222,474</u>	<u>.....</u>
	<u>427,764,822</u>	<u>392,080,587</u>

Obligated operating funds:

Fiscal year 1980	311,229	674,235
Fiscal years—Merged	1,857,423	7,352,546
Fiscal year 1984 .....	.....	1,862,745
Fiscal year 1985	2,148,693	5,525,097
Fiscal year 1986	5,695,374	60,361,536
Fiscal year 1987	<u>45,645,319</u>	<u>.....</u>
	<u>55,658,038</u>	<u>75,776,159</u>

Unobligated operating funds lapsed	<u>14,136,299</u>	<u>535,121</u>
	<u>497,559,159</u>	<u>468,391,867</u>

Capital funds:

Expenditures from capital appropriations:

Fiscal year 1980	31,578	126,014
Fiscal years 1981 through 1986 .....	.....	19,612,659
Fiscal years 1981 through 1987	<u>28,652,415</u>	<u>.....</u>
	<u>28,683,993</u>	<u>19,738,673</u>

Obligated capital funds:

Fiscal year 1980	12,070	20,908
Fiscal years 1981 through 1986 .....	.....	21,175,748
Fiscal years 1981 through 1987	<u>23,766,934</u>	<u>.....</u>
	<u>23,779,004</u>	<u>21,196,656</u>

Unobligated capital funds (no year):

Fiscal year 1980	8,257	30,997
Fiscal years 1981 through 1986 .....	.....	9,139,366
Fiscal years 1981 through 1987	<u>2,298,765</u>	<u>.....</u>
	<u>2,307,022</u>	<u>9,170,363</u>
	<u>54,770,019</u>	<u>50,105,692</u>

Unobligated emergency fund (no year)	<u>10,000,000</u>	<u>10,000,000</u>
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TOTAL APPLICATION OF APPROPRIATIONS	<u>\$562,329,178</u>	<u>\$528,497,559</u>
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The accompanying notes are an integral part of this statement.

**Table 6.—Statement of Property, Plant and Equipment
September 30, 1987 and 1986**

	1987	1986
	Estimated service life	
	Cost	Depreciation and valuation allowances
Titles and treaty rights		
Interest during construction	40 years	
Canal excavation, fills and embankments .....	.....	
Canal structures and equipment	15-100 years	
Supporting and general facilities	4-100 years	
Facilities held for future use	5-100 years	
Plant additions in progress	10-100 years	
Suspended construction projects .....	.....	
Total .....	.....	
	Cost	Depreciation and valuation allowances
	\$14,728,889	\$5,247,167
	50,892,311	50,892,311
	347,536,452	123,071,833
	301,627,426	145,097,031
	125,431,001	80,193,747
	2,824,202	2,377,516
	32,409,795	.....
	40,145,798	40,145,798
	<u>\$915,595,874</u>	<u>\$447,025,403</u>
	Cost	Depreciation and valuation allowances
	\$14,728,889	\$4,878,945
	50,892,311	50,892,311
	347,536,452	114,551,412
	288,439,752	138,474,168
	122,268,880	76,515,928
	2,827,602	2,381,656
	24,190,510	.....
	40,145,798	40,145,798
	<u>\$891,030,194</u>	<u>\$427,840,218</u>

The accompanying notes are an integral part of this statement.

NOTES TO FINANCIAL STATEMENTS

1. Summary of Significant Accounting Policies.

The Comptroller General of the United States approved the Accounting Principles and Standards Statement of the Panama Canal Commission in his letter dated September 14, 1982. A summary of significant accounting policies follows:

a. *Accounting and reporting.* As required by section 1311(a) of the Panama Canal Act of 1979 (Public Law 96-70), hereinafter referred to as the Act, the accounts of the Commission are maintained pursuant to the Accounting and Auditing Act of 1950. This requires that the principles, standards and related requirements be met, as prescribed by the Comptroller General of the United States, after consulting with the Secretary of the Treasury and the Director of the Office of Management and Budget concerning their accounting, financial reporting and budgetary needs. The Accounting and Auditing Act of 1950 also requires that the accounts be maintained on an accrual basis.

b. *Cost recovery.* As required by section 1341(e)(1) of the Act, the application of generally accepted accounting principles to the Panama Canal Commission, a United States Government agency comparable to a rate-regulated public utility, determines the manner in which costs are recognized. The basis for tolls rates is prescribed in section 1602(b) of the Act. This section of the Act, known as the "statutory tolls formula," provides that:

"Tolls shall be prescribed at rates calculated to produce revenues to cover as nearly as practicable all costs of maintaining and operating the Panama Canal, together with the facilities and appurtenances related thereto, including unrecovered costs incurred on or after the effective date of this Act, interest, depreciation, payments to the Republic of Panama pursuant to paragraph 5 of Article III and paragraph 4(a) and (b) of Article XIII of the Panama Canal Treaty of 1977, and capital for plant replacement, expansion, and improvements. Tolls shall not be prescribed at rates calculated to produce revenues sufficient to cover payments to the Republic of Panama pursuant to paragraph 4(c) of Article XIII of the Panama Canal Treaty of 1977."

Under this statutory tolls formula, any unrecovered costs are to be recovered from subsequent revenues. The amount for recovery from subsequent revenues is transferred from Invested Capital to an account within the Other Assets classification. Unrecovered costs are charged back to

Invested Capital to the extent subsequent annual revenues exceed annual costs.

c. *Property, plant and equipment.* Property, plant and equipment are recorded at cost, or if acquired from another United States Government agency, at the value determined by the Director of the Office of Management and Budget. Administrative and other related general expenses are recovered currently and therefore not capitalized. The cost of minor items of property, plant and equipment is charged to expense as incurred.

d. *Advances for capital.* A portion of tolls in excess of depreciation recoveries may be programmed annually by the Board of Directors for plant replacement, expansion, or improvements. In fiscal year 1986, \$3.1 million were programmed for this purpose. In fiscal year 1987 no amounts were programmed. Such funds are considered capital advances from Canal users. Upon utilization, these advances are amortized through an offset to depreciation expense in an amount calculated to approximate the depreciation on assets acquired with such advances.

e. *Depreciation.* Property, plant and equipment are depreciated over their estimated service lives at rates computed using a straight-line method with additional annual depreciation, identified as composite, to provide for premature plant retirements.

The recurring costs of dredging the waterway are charged to expense. Non-recurring dredging costs for substantial improvements and betterments to the waterway are considered additions to plant and are capitalized and depreciated over their estimated service lives.

f. *Accounts receivable.* Uncollectible accounts receivable of the Panama Canal Commission are recognized as a reduction in revenue when written off. Any subsequent collections of Commission accounts receivable previously written off are recorded as revenue.

g. *Inventories.* Operating materials and supplies are stated at average cost, plus cost of transportation to the ultimate destination on the Isthmus of Panama. An allowance has been established to reflect the estimated cost of obsolete and excess stock.

h. *Retirement benefits.* Employer payments to the contributory United States Civil Service Retirement System and to the Republic of Panama Social Security System are charged to expense. The Commission has no liability for future payments to employees under these systems.

Non-United States citizen employees who retired from predecessor agencies prior to October 5, 1958, are not covered by the United States Civil Service Retirement System but do receive benefits under a separate annuity plan. Payments made under this annuity plan are recorded as a current year expense. Annual amounts expended were \$1.4 million in fiscal year 1987 and fiscal year 1986. The liability of the Commission for future

annuity payments to these former employees or their eligible widows is reflected in the balance sheet as retirement benefits to certain former employees of predecessor agencies and an equal amount is recorded as a Deferred charge.

As required by the Act, the Panama Canal Commission is liable for the increase in the unfunded liability of the United States Civil Service Retirement Fund which is attributable to benefits payable from that fund to, or on behalf of, employees and their survivors under the early retirement provisions of the Act. The annual installment to liquidate the increased liability is determined by the Office of Personnel Management.

i. *Reserve for lock overhauls.* A reserve is provided through an annual charge to expense to cover the estimated cost of periodic lock overhauls.

j. *Reserve for casualty losses.* A reserve is provided through an annual charge to expense to cover the estimated cost of marine accidents and other casualty losses.

k. *Reserve for floating equipment overhaul.* A reserve is provided through an annual charge to expense to cover the estimated cost of overhauls to the Commission tugboat fleet.

l. *Housing use rights.* No monetary value is assigned to the rights granted to the United States Government by the Republic of Panama to use Canal Area housing transferred to the Government of Panama under the terms of the Panama Canal Treaty of 1977. The cost to manage, maintain and provide livability improvements to these quarters is charged to expense. Rental income is included in other revenues.

m. *Work injuries compensation benefits.* Under provisions of the Act, the Panama Canal Commission is liable for payment of all benefits due under the Federal Employees' Compensation Act (FECA) which provides compensation for workplace injuries for eligible employees. The Commission accounts for these costs on an accrual basis.

2. Plant Valuation Allowances.

At July 1, 1951, certain valuation allowances for property, plant and equipment transferred from the Panama Canal (agency) to the Panama Canal Company and the Canal Zone Government were established, to reduce to usable value the costs of the assets transferred. At October 1, 1979, such valuation allowances as were applicable to the assets transferred from the Panama Canal Company and the Canal Zone Government to the Panama Canal Commission were carried forward and are comprised of: (a) \$4.7 million at September 30, 1987, and 1986, to reduce to usable value the cost of property, plant and equipment transferred; (b) \$50.9 million at September 30, 1987, and 1986, to offset interest costs imputed for the original Canal construction period; and (c) \$42.3 million at September 30, 1987, and 1986, to offset the cost of defense facilities and suspended con-

struction projects, the latter being principally the partial construction of a third set of locks abandoned in the early part of World War II.

Property, plant and equipment offset by valuation allowances, when fully or partially reactivated, are reinstated by a reduction in the valuation allowance and by an increase to the non-interest-bearing investment of the United States Government in proportion to the value to the Commission of the reactivated asset.

3. Cash and Fund Balances.

As of September 30, 1987, the cash and fund balances totaled \$94,181,435. Of this total, \$91,744,064 represents current unexpended appropriated funds for operations, capital and the emergency fund, and \$2,437,371 represents postal and trust funds. These funds are deposited: \$87,961,303 in the United States Treasury, \$2,717,457 in commercial banks and \$3,502,675 on hand.

As of September 30, 1986, the cash and fund balances totaled \$117,985,850. Of this total, \$116,143,178 represented unexpended appropriated funds for operations, capital and the emergency fund, and \$1,842,672 represented postal and trust funds. These funds were deposited: \$111,480,204 in the United States Treasury, \$2,209,950 in commercial banks and \$4,295,696 on hand.

The unexpended appropriated funds for operations are limited to paying operating obligations incurred but not yet liquidated. The unexpended appropriated funds for capital are limited to paying for the acquisition or construction of property, plant and equipment.

The emergency fund represents the amount on deposit in the United States Treasury which is to be used “. . . to defray emergency expenditures and to insure the continuous efficient and safe operation of the Panama Canal when funds appropriated for the operation and maintenance of the Canal prove insufficient for such purposes. . . .”

The postal fund consists of outstanding money orders, postal savings and interest accrued thereon. This fund will remain available until liquidated. The trust fund primarily includes deposits made by customers for future tolls and other service payments.

4. Panama Canal Commission Fund.

The Panama Canal Commission Fund as established by the Panama Canal Act of 1979 (the Act) is made up of receipts deposited in the United States Treasury less appropriation warrants issued during the fiscal year. The balance in this account, \$176.9 million as of September 30, 1987, and \$167.7 million as of September 30, 1986, is available for future appropriations.

Section 1302 of the Act provides that all appropriations necessary to operate the Panama Canal shall be issued from the Panama Canal Commission Fund. The appropriations for fiscal year 1980 were issued to the Commission from the General Fund of the United States Treasury. The status of the amount still owed to the General Fund of the United States Treasury for fiscal year 1980 is as follows:

	<i>Millions of Dollars</i>	
Operating Appropriation	\$427.2	
Capital Appropriation	36.6	\$463.8
Repaid to General Fund (07/81)	(350.0)	
Repaid to General Fund (12/82)	<u>(28.2)</u>	<u>(378.2)</u>
Amount owed General Fund of U.S. Treasury as of September 30, 1987		<u>\$ 85.6</u>

5. Unrecovered Cost Due From Subsequent Revenues.

Pursuant to the provisions of section 1602(b) of the Panama Canal Act of 1979 (Public Law 96-70), the net loss from fiscal year 1987 operations of \$0.6 million was deferred as an unearned cost to be recovered from subsequent revenues. Also, in accordance with section 1341(b) (2) of the Act such unearned costs must be deducted from any future net operating revenue due to the Government of Panama.

6. Net Revenue Payable to Government of Panama.

Based on the provisions of paragraph 4 (c) of Article XIII of the Panama Canal Treaty, which states that an annual amount of up to \$10 million will be paid out of Canal operating revenue to the extent that such revenue exceed expenditures of the Panama Canal Commission, net revenue in the amount of \$2.0 million from fiscal year 1986 operation was payable to the Government of Panama. This net revenue was paid to the Government of Panama on July 20, 1987.

7. Cost of Work Injuries Compensation.

The Commission administers a self-insured program to compensate certain employees for death and disability resulting from workplace injuries or illnesses as set forth in the Federal Employees' Compensation Act (FECA). All United States citizen employees are eligible for coverage, as are non-United States citizen employees hired prior to October 1, 1979 who elected coverage on that date. As provided by FECA, employees and certain dependents are beneficiaries for various periods that can extend to life.

The liability and deferred charge recorded in these statements reflect the net present value of all expected future payments for accidents occurring prior to October 1, 1987, adjusted for inflation. The gross amount to be

recovered from tolls over the remaining life of the Treaty to retire this liability is \$75.6 million.

8. Accounting Changes.

a. Effective in fiscal year 1987, the Commission changed from a cash basis to an accrual basis in accounting for workmen's injury compensation costs under the Federal Employees' Compensation Act. To implement this change, the cost of accidents will be expensed as incurred starting in fiscal year 1989. Also beginning in 1989, the unamortized cost of accidents which occur prior to that year will be amortized to expense over the remaining life of the Treaty. In fiscal year 1987, the total liability for past accidents was recorded. This change has no impact on the fiscal year 1987 financial position or operating results of the Commission.

b. Effective with fiscal year 1987 financial statements, advances for capital will no longer be shown as separate line items on the Statement of Operations and Non-Interest-Bearing Investment. In prior years, advances for capital were shown as deductions from tolls and other revenues. This presentation has been discontinued because those collections represent direct capital contributions by Canal users and not operating revenues. The fiscal year 1986 presentation was changed to be consistent with fiscal year 1987.

c. Effective January 1, 1986, the Commission implemented a change in the treatment of interest required by enactment of Public Law 99-195 on December 23, 1985 which amended, prospectively, the interest provision of the Panama Canal Act of 1979. Under the Act as amended, interest on the United States investment in the Panama Canal will be deposited into the General Fund of the United States Treasury as miscellaneous receipts rather than into the Panama Canal Commission Fund. Accordingly, as of January 1, 1986, interest will no longer reduce the investment base. Interest for fiscal year 1986 amounted to \$6,786,828 of which \$4,838,299 was deposited into the General Fund of the United States Treasury in accordance with the Act, as amended.

d. Public Law 99-209, dated December 23, 1985, amended the Act to authorize the Commission to adjust and pay damages from marine accidents which occurred outside the locks where the amount of the claim exceeded \$120,000. The authority under Public Law 99-209 is retroactive to October 1, 1979. Prior to this amendment, the Commission's authority was limited to those claims for accidents which occurred (i) prior to October 1, 1979, (ii) within the locks after September 30, 1979, or (iii) outside the locks where the claim was \$120,000 or less. Claims exceeding \$120,000 for accidents occurring outside the locks were, prior to the amendment, required to be submitted to Congress for approval and were booked as non-fund liabilities. Beginning in fiscal year 1986, the Commission elimi-

nated the non-fund category of marine accident liabilities and recognized all these liabilities as funded.

9. Interest-Bearing Investment of the United States Government.

The interest-bearing investment of the United States Government in the Panama Canal is determined based on section 1603(a) of the Act. The interest-bearing investment of the United States Government at September 30, 1987, and September 30, 1986, was determined as follows:

	<i>Millions of Dollars</i>
Investment at September 30, 1985	\$76.9
Fiscal year 1986 transactions:	
Disbursements	\$411.9
Receipts	(437.0)
Net property transfers	(2.0)
Net change	(27.1)
Investment at September 30, 1986	49.8
Fiscal year 1987 transactions:	
Disbursements	456.4
Receipts	(441.2)
Net property transfers	(0.3)
Net change	14.9
Investment at September 30, 1987	<u>\$64.7</u>

10. Advances for Capital—Transit Booking System Fees.

With the approval of the Board of Directors, a system was activated in fiscal year 1983 whereby shippers, for a fee, can make an advance reservation for vessel transit. This system generated funds of \$5.8 million in fiscal year 1987 and \$7.4 million in fiscal year 1986. Such funds are considered capital advances from Canal users. By direction of the Board of Directors, these fees are set aside for capital improvements. Upon utilization, these advances are amortized through an offset to depreciation expense in an amount calculated to approximate the depreciation on assets acquired with such advances.

11. Contingent Liabilities and Commitments.

In addition to recorded liabilities, the estimated maximum contingent liability which could result from pending claims and lawsuits was \$19.6 million at September 30, 1987, and \$14.1 million at September 30, 1986. In the opinion of management and Commission counsel, these pending claims and lawsuits will be resolved with no material adverse effect on the financial condition of the agency.

Commitments under uncompleted construction contracts and unfilled purchase orders amounted to \$40.0 million at September 30, 1987, and \$39.9 million at September 30, 1986. Of these amounts \$0.1 million in unfilled purchase orders were prepaid as of September 30, 1987, and 1986.

Cash and negotiable securities of a kind acceptable by the United States Government in the amount of \$11.4 million were held by United States depositories designated by the Panama Canal Commission at September 30, 1987, and \$8.9 million at September 30, 1986, to guarantee payment by third parties of their obligations.

The Panama Canal Treaty of 1977, Article XIII, paragraph 4(c), provides that an annual amount of up to \$10 million per year be paid to the Government of Panama out of operating revenues to the extent that such revenues exceed expenditures. Payment to the Government of Panama is subject to the limitations set forth in section 1341(e) of the Act. In the event operating revenues in any year do not produce a surplus sufficient to cover this payment, the unpaid balance shall be paid from operating surpluses in future years up to the amount available from these surpluses. As of September 30, 1987, the balance contingently payable to the Government of Panama amounts to \$71.1 million. As of September 30, 1986, the balance contingently payable to the Government of Panama amounted to \$61.1 million.

12. Treaty Impact.

On September 7, 1977, the United States of America and the Republic of Panama signed the Panama Canal Treaty of 1977. The Treaty provided for the establishment of the Panama Canal Commission on October 1, 1979, to assume certain operational responsibilities for the Canal until December 31, 1999. When the Treaty terminates on December 31, 1999, the Republic of Panama shall assume total responsibility for the management, operation, and maintenance of the Panama Canal, which shall be turned over in operating condition and free of liens and debts, except as the two Parties may otherwise agree. The effects of these long-range requirements are not considered in the financial statements.

13. Recent Legislation—Public Law 100-203.

Public Law 100-203, converted the Panama Canal Commission from a special fund agency to a revolving fund agency effective January 1, 1988. This conversion to a revolving fund financial structure is not expected to result in any major change in the accounting policies and principles of the Commission. In addition to affecting the financial format of the agency, Public Law 100-203 provides: (a) for reimbursement to the General Fund of the U.S. Treasury of the \$85.6 million balance of the 1980 appropriation to the Commission, as described in note 4; and (b) for restoring \$61.7 million to the interest-bearing investment of the United States Government in the Panama Canal by transferring interest collections prior to January 1, 1986 to the General Fund of the U.S. Treasury.

Chapter VI

STATISTICAL TABLES

Shipping Statistics

Table 1.—Panama Canal Traffic—Fiscal Years 1978 Through 1987

Fiscal year	Total traffic			Traffic assessed tolls on net tonnage basis		Traffic assessed tolls on displacement tonnage basis	
	Number of transits	Tolls	Long tons of cargo	Number of transits	Panama Canal net tonnage	Number of transits	Displacement tonnage
OCEANGOING COMMERCIAL TRAFFIC ¹							
1978	12,677	194,773,111	142,518,288	12,647	156,907,260	30	109,798
1979	12,935	208,376,741	154,110,866	12,902	167,470,601	33	136,600
1980	13,507	291,838,590	167,214,935	13,476	182,063,175	31	137,593
1981	13,884	301,762,600	171,221,762	13,847	188,656,491	37	111,418
1982	14,009	323,958,366	185,452,332	13,976	202,884,207	33	129,684
1983	11,707	285,983,805	145,590,759	11,668	169,503,918	39	132,431
1984	11,230	286,677,844	140,470,818	11,199	162,335,342	31	116,335
1985	11,515	298,497,802	138,643,243	11,498	168,941,997	17	86,623
1986	11,925	321,073,748	139,945,181	11,901	182,750,830	24	73,631
1987	12,230	328,372,714	148,690,380	12,206	186,406,530	24	130,129
OCEANGOING U.S. GOVERNMENT TRAFFIC ¹							
1978	103	889,093	291,115	70	589,085	33	214,145
1979	111	1,054,169	357,482	80	726,755	31	207,640
1980	101	1,515,326	396,481	73	844,748	28	217,055
1981	89	1,241,442	301,776	68	705,936	21	143,121
1982	110	1,546,746	285,451	67	794,282	43	309,206
1983	125	1,721,925	354,873	77	812,840	48	350,699
1984	137	2,388,272	329,607	88	1,131,865	49	410,682
1985	129	2,223,938	259,524	85	1,148,311	44	248,967
1986	85	1,553,037	176,853	53	708,616	32	309,161
1987	78	1,384,125	205,701	46	662,286	32	239,023
FREE OCEANGOING TRAFFIC ^{1 2}							
1978	5	.....	.....	4	3,789	1	1,100
1979	10	.....	1	8	4,527	2	2,194
1980	6	.....	.....	3	1,686	3	4,810
1981	11	.....	.....	4	2,248	7	8,544
1982	23	.....	.....	9	5,010	14	21,903
1983	14	.....	2,504	9	9,119	5	5,986
1984	17	.....	.....	4	2,224	13	21,025
1985	10	.....	20	4	2,731	6	8,771
1986	13	.....	.....	1	556	12	20,759
1987	5	.....	5	4	2,224	1	1,300
TOTAL OCEANGOING TRAFFIC ¹							
1978	12,785	195,662,204	142,809,403	12,721	157,500,134	64	325,043
1979	13,056	209,430,910	154,468,349	12,990	168,201,883	66	346,434
1980	13,614	293,353,916	167,611,416	13,552	182,909,609	62	359,458
1981	13,984	303,004,042	171,523,538	13,919	189,364,675	65	263,083
1982	14,142	325,505,112	185,737,783	14,052	203,683,499	90	460,793
1983	11,846	287,705,730	145,948,136	11,754	170,325,877	92	489,116
1984	11,384	289,066,116	140,800,425	11,291	163,469,431	93	548,042
1985	11,654	300,721,740	138,902,787	11,587	170,093,039	67	344,361
1986	12,023	322,626,785	140,122,034	11,955	183,460,002	68	403,551
1987	12,313	329,756,840	148,896,086	12,256	187,071,040	57	370,452

Table 1.—Panama Canal Traffic—Fiscal Years 1978 Through 1987
(Continued)

Fiscal year	Total traffic			Traffic assessed tolls on net tonnage basis		Traffic assessed tolls on displacement tonnage basis	
	Number of transits	Tolls	Long tons of cargo	Number of transits	Panama Canal net tonnage	Number of transits	Displacement tonnage
SMALL COMMERCIAL TRAFFIC ³							
1978	792	63,526	6,962	785	57,827	7	1,040
1979	936	76,591	7,718	934	69,229	2	94
1980	788	74,898	787	787	52,052	1	57
1981	791	65,604	1,355	788	44,962	3	279
1982	830	73,228	928	826	50,399	4	315
1983	810	73,887	669	810	48,033	....	.....
1984	802	76,921	652	800	48,008	2	145
1985	793	73,710	468	792	45,694	1	110
1986	912	89,577	3,704	904	55,249	8	470
1987	852	90,829	3,282	852	55,827	....	.....
SMALL U.S. GOVERNMENT TRAFFIC ³							
1978	187	9,504	8	25	1,446	162	10,742
1979	315	14,375	9	48	2,865	267	15,519
1980	276	15,129	.....	29	1,357	247	14,313
1981	225	10,712	2	16	751	209	10,431
1982	241	10,757	.....	12	415	229	10,973
1983	242	11,406	5	12	332	230	11,177
1984	241	11,998	.....	8	236	233	11,282
1985	273	12,464	.....	15	773	258	11,113
1986	316	17,840	.....	20	627	296	16,407
1987	236	11,106	.....	25	987	211	9,572
SMALL FREE TRAFFIC ^{2 3}							
1978	44	.....	20	42	2,986	2	72
1979	55	.....	3	47	2,160	8	632
1980	47	.....	.....	41	2,317	6	560
1981	50	.....	.....	41	2,613	9	1,012
1982	58	.....	70	40	2,803	18	1,172
1983	56	.....	8	39	2,321	17	2,010
1984	96	.....	59	86	4,637	10	1,360
1985	46	.....	3	32	1,721	14	1,103
1986	27	.....	80	20	1,371	7	674
1987	43	.....	57	26	1,451	17	1,012
TOTAL PANAMA CANAL TRAFFIC							
1978	13,808	195,735,234	142,816,393	13,573	157,562,393	235	336,897
1979	14,362	209,521,876	154,476,079	14,019	168,276,137	343	362,679
1980	14,725	293,443,943	167,612,203	14,409	182,965,335	316	374,388
1981	15,050	303,080,358	171,524,895	14,764	189,413,001	286	274,805
1982	15,271	325,589,097	185,738,781	14,930	203,737,116	341	473,253
1983	12,954	287,791,023	145,948,818	12,615	170,376,563	339	502,303
1984	12,523	289,155,035	140,801,136	12,185	163,522,412	338	560,829
1985	12,766	300,807,914	138,903,258	12,426	170,141,227	340	356,687
1986	13,278	322,734,202	140,125,818	12,899	183,517,249	379	421,102
1987	13,444	329,858,775	148,899,425	13,159	187,129,305	285	381,036

¹ Ongoing traffic includes ships of 300 net tons and over; Panama Canal measurement, or of 500 displacement tons and over on vessels paying tolls on displacement basis (dredges, warships, etc.).

² Free traffic includes ships of the Colombian and Panamanian Governments and ships transiting for repair by the Commission.

³ Includes vessels under 300 net tons, Panama Canal measurement (or under 500 displacement tons for vessels assessed on displacement tonnage).

Table 2.—Oceangoing Commercial Traffic by Months—Fiscal Years 1987 and 1986

	Number of Transits		Panama Canal Net Tonnage		Long Tons of Cargo		Tolls	
	1986-87	1985-86	1986-87	1985-86	1986-87	1985-86	1986-87	1985-86
October.....	974	1,023	15,271,569	15,755,054	12,024,411	12,421,246	\$ 27,018,718	\$ 27,728,150
November.....	1,063	999	16,766,740	15,500,886	12,836,251	12,068,720	29,443,943	27,200,683
December.....	1,026	973	16,371,635	15,070,554	12,435,273	11,601,750	28,668,718	26,657,676
January.....	1,024	1,019	15,455,363	15,310,085	11,951,475	11,667,355	27,180,307	26,946,687
February.....	962	879	14,626,744	13,048,320	11,558,412	9,867,014	25,653,899	22,985,849
March.....	1,072	1,057	15,277,765	16,149,153	11,989,051	12,201,051	26,894,455	28,271,106
April.....	1,041	1,026	15,452,727	15,889,710	12,632,112	12,500,141	27,349,267	27,981,933
May.....	1,034	1,067	15,758,513	16,713,740	12,380,904	11,811,885	27,778,988	29,118,514
June.....	1,000	972	15,208,298	14,976,048	12,257,040	11,441,598	26,742,301	26,329,749
July.....	1,020	1,017	14,927,232	15,653,076	11,606,948	11,843,699	26,411,019	27,428,194
August.....	1,040	990	16,207,063	15,167,021	13,582,446	11,425,871	28,511,509	26,616,812
September.....	974	903	15,082,881	13,517,183	13,436,057	11,094,851	26,719,590	23,808,395
Total.....	12,230	11,925	186,406,530	182,750,830	148,690,380	139,945,181	\$328,372,714	\$321,073,748
Average per month.....	1,019	994	15,533,794	15,229,236	12,390,865	11,662,098	\$27,364,393	\$26,756,146

NOTE: The above includes only commercial vessels of 300 net tons and over. Panama Canal measurement, or of 500 displacement tons and over on vessels paying tolls on a displacement tonnage basis. Statistics on these vessels, except as relates to displacement tonnage, have been included in the table above.

Table 3.—Canal Traffic, by Flag of Vessel—Fiscal Year 1987

Flag	Num- ber of transits	Measured tonnage		Tolls	Long tons of cargo
		Panama Canal net	Registered gross ²		
Antigua	3	7,118	5,277	\$13,026	6,392
Argentina	1	9,426	10,076	17,250	2,811
Australia	2	56,649	69,044	103,668	37,855
Austria	5	130,817	149,251	228,879	173,113
Bahamas	246	3,115,197	3,720,897	5,542,319	2,257,283
Belgium	61	1,038,579	1,202,637	1,864,069	1,076,395
Bermuda	11	137,689	155,952	235,681	100,725
Brazil	19	198,488	265,198	366,546	194,958
Bulgaria	15	157,555	192,231	266,523	73,111
Canada	9	71,815	91,098	120,364	31,782
Cayman Islands	50	549,977	280,936	1,005,360	113,735
Chile	85	797,819	913,221	1,428,636	707,981
Colombia	175	1,505,666	1,443,645	2,716,083	466,575
Costa Rica	2	6,333	4,309	11,239	738
Cuba	141	769,338	906,822	1,362,958	492,422
Cyprus	448	4,726,979	5,495,912	8,538,748	5,435,920
Czechoslovakia	4	44,718	53,621	80,325	54,783
Denmark	202	4,530,447	5,650,781	8,227,417	2,801,117
Dominica	2	3,370	2,954	5,544	1,108
Dominican Republic	2	1,256	998	2,066	819
East Germany	52	363,742	405,311	641,679	128,832
Ecuador	533	4,583,825	5,307,672	8,011,041	3,326,892
Egypt	2	36,162	44,204	66,176	60,722
El Salvador	5	5,715	5,730	10,036	935
Finland	1	22,491	24,464	41,159	30,699
France	73	989,574	761,667	1,813,581	501,106
Ghana	4	39,427	52,016	72,151	27,537
Greece	678	9,845,011	11,240,399	17,557,206	12,694,682
Guatemala	7	24,528	28,903	42,293	27,901
Honduras	14	53,359	66,149	91,209	16,739
Hong Kong	43	897,094	1,053,491	1,600,273	911,622
India	26	526,231	636,134	926,691	589,854
Israel	67	1,353,472	1,786,701	2,476,854	969,014
Italy	98	1,541,314	1,889,868	2,706,305	1,086,927
Japan	1,170	24,215,003	16,458,153	40,835,609	7,489,522
Jordan	3	30,903	38,922	56,552	56,746
Kuwait	12	145,153	184,794	265,630	109,942
Liberia	1,225	25,361,198	25,075,674	44,452,492	24,885,302
Malaysia	15	337,142	382,639	610,898	568,963
Malta	13	211,867	259,485	387,717	360,047
Mexico	123	2,301,627	2,772,637	3,854,499	1,729,870
Morocco	4	29,614	30,812	52,724	37,859
Netherlands	240	2,421,114	2,638,872	4,371,797	1,973,246
New Guinea	1	1,392	1,190	2,032	.....
New Zealand	4	17,716	15,430	28,062	267
Nicaragua	3	16,094	18,414	23,497	.....
Nigeria	1	9,924	13,197	18,161	7,354
North Korea	1	8,556	9,160	15,657	11,121
Norway	74	1,608,175	1,621,850	2,903,936	1,299,110
Panama	2,467	40,136,752	40,304,380	70,695,766	30,923,310
People's Republic of China	109	2,035,988	2,538,507	3,764,969	2,540,121
Peru	139	1,337,188	1,487,855	2,377,431	1,477,623
Philippines	305	5,919,793	6,214,564	10,552,406	7,421,945
Poland	99	750,389	856,935	1,361,751	464,811
Portugal	29	166,934	207,263	279,931	37,176
Qatar	2	24,250	30,250	44,378	16,110
Rumania	4	80,076	88,048	131,725	61,102
St. Vincent	7	82,330	100,794	149,083	109,326
Samoa	3	27,597	31,650	50,503	16,672
Saudi Arabia	4	56,552	67,746	103,490	55,062
Sierra Leone	1	674	964	1,233	15
Singapore	250	5,144,510	5,098,676	8,988,310	4,183,975
Somali Republic	2	18,630	21,086	34,093	13,871
South Korea	174	3,610,319	4,085,481	6,377,250	3,128,347
Spain	80	496,786	517,258	900,230	354,466
Sri Lanka	31	344,364	432,339	614,101	210,151
Sweden	64	2,414,120	1,799,664	4,388,473	514,814
Switzerland	69	765,879	907,784	1,374,630	564,545
Taiwan	184	5,047,563	5,995,796	9,237,040	4,605,327
Thailand	1	14,202	16,125	25,990	19,223
Toga	4	23,872	16,959	43,686	16,159
Turkey	25	280,532	355,268	497,052	401,351
United Arab Emirates	1	12,058	15,135	22,066	3,960
United Kingdom	396	7,296,624	8,874,909	13,161,879	7,531,907
United States	665	5,946,211	6,354,955	10,201,551	4,435,973
Uruguay	1	.....	683	714	.....
U.S.S.R.	635	4,977,004	5,748,311	8,696,726	3,008,296

Table 3.—Canal Traffic ₁ by Flag of Vessel—Fiscal Year 1987—Continued

Flag	Number of transits	Measured tonnage		Tolls	Long tons of cargo
		Panama Canal net	Registered gross ²		
Vanuatu	30	254,430	236,185	458,455	246,105
Venezuela	138	355,579	401,646	635,142	206,545
West Germany	269	3,069,968	3,566,915	5,573,453	2,192,702
Yugoslavia	67	858,697	1,007,482	1,556,589	996,956
Total	12,230	186,406,530	190,800,411	\$328,372,714	148,690,380

¹ Includes only commercial vessels of 300 net tons and over, Panama Canal measurement, or of 500 displacement tons and over on vessels paying tolls on displacement basis (dredges, warships, etc.).

² Includes 8 transits where no registered tonnage was reported.

NOTE.—In Canal traffic statistics, foreign naval vessels such as transports, supply ships, tankers, etc., with a measure-ment of 300 net tons (Panama Canal measurement) and over, and vessels of war, dredges, etc., with a displacement of 500 tons and over, are classified as oceangoing commercial vessels. Statistics on these vessels, except as related to displace-ment tonnage, have been included in the table above. As displacement tonnage cannot be combined with net tonnage, the following table shows statistics covering 24 vessels which transited the Canal during fiscal year 1986 and paid tolls on displacement tonnage.

Flag	Type	Number of transits	Displace-ment tonnage	Tolls
Brazil	Naval	1	3,248	\$3,313
Canada	Naval	2	7,635	7,788
Ecuador	Naval	2	5,200	5,304
France	Naval	1	8,140	8,303
Japan	Naval	3	12,880	13,138
Mexico	Naval	2	3,530	3,601
Netherlands	Dredge	1	8,001	8,161
People's Republic of China	Dredge	3	51,836	52,873
Sweden	Naval	1	3,357	3,424
United Kingdom	Naval	4	13,231	13,496
United States	Dredge	2	10,421	10,629
Uruguay	Naval	1	700	714
West Germany	Naval	1	1,950	1,989
Total		24	130,129	\$132,732

Statistics compiled by Office of Executive Planning.

Table 4.—Classification of Canal Traffic¹ by Type of Vessel—Fiscal Year 1987

Type of Vessel	Laden			Ballast		
	Atlantic to Pacific	Pacific to Atlantic	Total	Atlantic to Pacific	Pacific to Atlantic	Total
CARGO AND CARGO/PASSENGER SHIPS:						
Bulk Carriers:						
Number of transits	1,799	1,662	3,461	553	153	706
Panama Canal net tonnage (thousands)	36,578	37,229	73,807	19,419	1,678	21,096
Tolls (thousands of dollars)	\$66,938	\$68,122	\$135,059	\$28,352	\$2,779	\$30,801
Cargo (thousands of long tons)	52,272	29,446	82,718	.....	.....	.....
Container Cargo Ships:						
Number of transits	828	909	1,737	18	20	38
Panama Canal net tonnage (thousands)	15,576	18,427	34,003	180	131	311
Tolls (thousands of dollars)	\$28,504	\$33,722	\$62,226	\$263	\$191	\$454
Cargo (thousands of long tons)	10,677	12,057	22,734	.....	.....	.....
General Cargo Ships:						
Number of transits	825	785	1,610	62	104	166
Panama Canal net tonnage (thousands)	6,247	6,352	12,600	425	433	858
Tolls (thousands of dollars)	\$11,433	\$11,625	\$23,058	\$620	\$632	\$1,252
Cargo (thousands of long tons)	4,919	4,560	9,479	.....	.....	.....
Passenger Ships:²						
Number of transits	123	73	196	4	2	6
Panama Canal net tonnage (thousands)	2,149	1,117	3,265	8	18	26
Tolls (thousands of dollars)	\$3,932	\$2,044	\$5,975	\$12	\$26	\$38
Cargo (thousands of long tons) .....	.....	.....	.....	.....	.....	.....
Refrigerated Cargo Ships:						
Number of transits	631	1,018	1,649	482	67	549
Panama Canal net tonnage (thousands)	2,806	5,412	8,218	2,478	257	2,735
Tolls (thousands of dollars)	\$5,134	\$9,904	\$15,038	\$3,618	\$376	\$3,993
Cargo (thousands of long tons)	587	2,740	3,327	.....	.....	.....
Tank Ships:						
Number of transits	739	425	1,164	184	336	520
Panama Canal net tonnage (thousands)	10,959	7,632	18,591	4,214	4,983	9,197
Tolls (thousands of dollars)	\$20,055	\$13,966	\$34,022	\$6,152	\$7,276	\$13,428
Cargo (thousands of long tons)	17,056	12,472	29,528	.....	.....	.....
Grand Total						
Number of transits	1,799	1,662	3,461	553	153	706
Panama Canal net tonnage (thousands)	36,578	37,229	73,807	19,419	1,678	21,096
Tolls (thousands of dollars)	\$66,938	\$68,122	\$135,059	\$28,352	\$2,779	\$30,801
Cargo (thousands of long tons)	52,272	29,446	82,718	.....	.....	.....
Number of transits	828	909	1,737	18	20	38
Panama Canal net tonnage (thousands)	15,576	18,427	34,003	180	131	311
Tolls (thousands of dollars)	\$28,504	\$33,722	\$62,226	\$263	\$191	\$454
Cargo (thousands of long tons)	10,677	12,057	22,734	.....	.....	.....
Number of transits	825	785	1,610	62	104	166
Panama Canal net tonnage (thousands)	6,247	6,352	12,600	425	433	858
Tolls (thousands of dollars)	\$11,433	\$11,625	\$23,058	\$620	\$632	\$1,252
Cargo (thousands of long tons)	4,919	4,560	9,479	.....	.....	.....
Number of transits	123	73	196	4	2	6
Panama Canal net tonnage (thousands)	2,149	1,117	3,265	8	18	26
Tolls (thousands of dollars)	\$3,932	\$2,044	\$5,975	\$12	\$26	\$38
Cargo (thousands of long tons) .....	.....	.....	.....	.....	.....	.....
Number of transits	631	1,018	1,649	482	67	549
Panama Canal net tonnage (thousands)	2,806	5,412	8,218	2,478	257	2,735
Tolls (thousands of dollars)	\$5,134	\$9,904	\$15,038	\$3,618	\$376	\$3,993
Cargo (thousands of long tons)	587	2,740	3,327	.....	.....	.....
Number of transits	739	425	1,164	184	336	520
Panama Canal net tonnage (thousands)	10,959	7,632	18,591	4,214	4,983	9,197
Tolls (thousands of dollars)	\$20,055	\$13,966	\$34,022	\$6,152	\$7,276	\$13,428
Cargo (thousands of long tons)	17,056	12,472	29,528	.....	.....	.....

OTHER TYPE SHIPS:

Naval Vessels:

Number of transits	.....	.....	7	11	18
Displacement tonnage (thousands)	.....	.....	21	39	60
Tolls (thousands of dollars)	.....	.....	\$22	\$39	\$61
Cargo (thousands of long tons)	.....	.....	4	.....	4
Barges, Dredges, Drydocks, Tugs, etc.:					
Number of transits	146	121	63	80	143
Displacement tonnage (thousands)	.....	.....	18	53	70
Tolls (thousands of dollars)	\$1,167	\$888	\$369	\$543	\$912
Cargo (thousands of long tons)	492	409	.....	.....	\$2,968
SUMMARY:			.....	.....	901

Total Cargo and Cargo/Passenger Ships:

Number of transits	.....	.....	1,303	682	1,985
Panama Canal net tonnage (thousands)	4,945	4,872	26,723	7,500	34,223
Tolls (thousands of dollars)	74,315	76,170	\$39,016	\$10,950	\$49,966
Cargo (thousands of long tons)	\$135,996	\$139,382	.....	.....	.....
	86,511	61,275	.....	.....	.....

Total Other Type Ships:

Number of transits	146	121	70	91	161
Panama Canal net tonnage (thousands)	638	486	241	335	576
Displacement tonnage (thousands)	.....	.....	39	91	130
Tolls (thousands of dollars)	\$1,167	\$888	\$391	\$582	\$973
Cargo (thousands of long tons)	49	409	4	.....	\$3,029
Grand Total Ships:			.....	.....	904

Number of transits	5,091	4,993	1,373	773	2,146
Panama Canal net tonnage (thousands)	74,952	76,655	26,964	7,835	34,799
Displacement tonnage (thousands)	.....	.....	39	91	130
Tolls (thousands of dollars)	\$137,163	\$140,271	\$39,407	\$11,532	\$50,939
Cargo (thousands of long tons)	87,003	61,684	4	.....	4
					148,690

¹ Includes only commercial vessels of 300 net tons and over (Panama Canal measurement) for vessels paying tolls on net tonnage basis, or of 500 displacement tons and over for vessels paying on displacement tonnage.

² Vessels certificated for more than 12 passengers.

Statistics compiled by Office of Executive Planning.

Table 5.—Laden and Ballast Traffic by Flag of Vessel
Fiscal Year 1987

Flag	Laden			Ballast		
	Number of transits	Panama Canal net tonnage	Tolls	Number of transits	Panama Canal net tonnage	Tolls
Antigua	3	7,118	\$13,026	.....	.....	.....
Argentina	1	9,426	17,250	.....	.....	.....
Australia	2	56,649	103,668	.....	.....	.....
Austria	4	102,396	187,385	.....	.....	.....
Bahamas	198	2,686,842	4,916,921	48	428,355	625,398
Belgium	52	939,847	1,719,920	9	98,732	144,149
Bermuda	6	93,661	171,400	5	44,028	64,281
Brazil	18	198,488	363,233	.....	.....	.....
Bulgaria	9	98,630	180,493	6	58,925	86,030
Canada	4	20,883	38,216	3	50,932	74,361
Cayman Islands	48	547,009	1,001,026	2	2,968	4,333
Chile	69	696,072	1,273,812	15	101,747	148,551
Colombia	155	1,399,489	2,561,065	20	106,177	155,018
Costa Rica	1	5,386	9,856	1	947	1,383
Cuba	111	647,904	1,185,664	30	121,434	177,294
Cyprus	402	4,425,293	8,098,286	46	301,686	440,462
Czechoslovakia	3	40,640	74,371	1	4,078	5,954
Denmark	178	4,359,364	7,977,636	24	171,083	249,781
Dominica	1	1,685	3,084	1	1,685	2,460
Dominican Republic	1	628	1,149	1	628	917
East Germany	40	298,961	547,099	12	64,781	94,580
Ecuador	432	3,549,601	6,495,770	99	1,034,224	1,509,967
Egypt	2	36,162	66,176	.....	.....	.....
El Salvador	4	4,572	8,367	1	1,143	1,669
Finland	1	22,491	41,159	.....	.....	.....
France	62	974,324	1,783,013	10	15,250	22,265
Ghana	4	39,427	72,151	.....	.....	.....
Greece	594	8,604,027	15,745,369	84	1,240,984	1,811,837
Guatemala	5	17,520	32,062	2	7,008	10,232
Honduras	9	35,958	65,803	5	17,401	25,405
Hong Kong	36	785,178	1,436,876	7	111,916	163,397
India	21	428,091	783,407	5	98,140	143,284
Israel	67	1,353,472	2,476,854	.....	.....	.....
Italy	80	1,232,395	2,255,283	18	308,919	451,022
Japan	860	14,779,841	27,047,135	307	9,435,162	13,775,337
Jordan	3	30,903	56,552	.....	.....	.....
Kuwait	12	145,153	265,630	.....	.....	.....
Liberia	995	20,090,557	36,757,356	230	5,270,641	7,695,136
Malaysia	14	320,731	586,938	1	16,411	23,960
Malta	13	211,867	387,717	.....	.....	.....
Mexico	73	1,325,738	2,426,101	48	975,889	1,424,798
Morocco	3	25,643	46,927	1	3,971	5,798
Netherlands	201	2,240,027	4,099,249	38	181,087	264,387
New Guinea .....	.....	.....	.....	1	1,392	2,032
New Zealand	2	5,938	10,867	2	11,778	17,196
Nicaragua .....	.....	.....	.....	3	16,094	23,497
Nigeria	1	9,924	18,161	.....	.....	.....
North Korea	1	8,556	15,657	.....	.....	.....
Norway	66	1,502,705	2,749,950	8	105,470	153,986
Panama	2,058	32,692,184	59,826,697	409	7,444,568	10,869,069
People's Republic of China	102	1,998,795	3,657,795	4	37,193	54,302
Peru	119	1,149,018	2,102,703	20	188,170	274,728
Philippines	266	5,160,832	9,444,323	39	758,961	1,108,083
Poland	90	719,413	1,316,526	9	30,976	45,225
Portugal	17	97,857	179,078	12	69,077	100,852
Qatar	2	24,250	44,378	.....	.....	.....
Rumania	2	40,038	73,270	2	40,038	58,455
Saint Vincent	6	78,056	142,842	1	4,274	6,240
Samoa	3	27,597	50,503	.....	.....	.....
Saudi Arabia	4	56,552	103,490	.....	.....	.....
Sierra Leone	1	674	1,233	.....	.....	.....
Singapore	202	3,992,770	7,306,769	48	1,151,740	1,681,540
Somali Republic	2	18,630	34,093	.....	.....	.....
South Korea	155	2,989,687	5,471,127	19	620,632	906,123
Spain	72	472,763	865,156	8	24,023	35,074
Sri Lanka	26	300,892	550,632	5	43,472	63,469
Sweden	61	2,325,497	4,255,660	2	88,623	129,390
Switzerland	60	693,099	1,268,371	9	72,780	106,259

**Table 5.—Laden and Ballast Traffic by Flag of Vessel
Fiscal Year 1987—Continued**

<i>Flag</i>	<i>Laden</i>			<i>Ballast</i>		
	<i>Num- ber of transits</i>	<i>Panama Canal net tonnage</i>	<i>Tolls</i>	<i>Num- ber of transits</i>	<i>Panama Canal net tonnage</i>	<i>Tolls</i>
Taiwan	184	5,047,563	9,237,040	.....	.....	.....
Thailand	1	14,202	25,990	.....	.....	.....
Toga	4	23,872	43,686	.....	.....	.....
Turkey	19	236,419	432,647	6	44,113	64,405
United Arab Emirates	1	12,058	22,066	.....	.....	.....
United Kingdom	347	6,761,045	12,372,712	46	535,579	781,945
United States	471	4,079,605	7,465,677	192	1,866,606	2,725,245
Uruguay .....	.....	.....	.....	.....	.....	.....
U.S.S.R.	485	3,865,677	7,074,189	150	1,111,327	1,622,537
Vanuatu	25	235,101	430,235	5	19,329	28,220
Venezuela	212	313,505	573,714	26	42,074	61,428
West Germany	257	2,944,084	5,387,674	11	125,884	183,791
Yugoslavia	63	818,625	1,498,084	4	40,072	58,505
Total	10,084	151,607,532	\$277,433,446	2,122	34,798,998	\$50,806,537

Above table involves only commercial vessels of 300 net tons or over, Panama Canal measurement.
Statistics compiled by Office of Executive Planning.

Table 6.—Segregation of Transits¹ by Registered Gross Tonnage—Fiscal Year 1987

	Under 2,000	2,000 to 3,999	4,000 to 5,999	6,000 to 7,999	8,000 to 9,999	10,000 to 14,999	15,000 to 19,999	20,000 to 29,999	30,000 to 39,999	40,000 to over	Total ²	Registered gross tonnage	Average gross tonnage per vessel
Antigua.....	2	1									3	5,277	1,759
Argentina.....											1	10,076	10,076
Australia.....										1	2	69,044	34,522
Austria.....									3		5	149,251	29,850
Bahamas.....	10	23	6	10	39	45	37	66	9	1	246	3,720,897	15,126
Belgium.....	1			14		13	2	21	10		61	1,202,637	19,715
Bermuda.....		1		4		3	1				11	155,952	14,177
Brazil.....						15		1	2		18	263,158	14,620
Bulgaria.....					2	10	2	1			15	192,231	12,815
Canada.....								2			7	82,930	11,847
Cayman Islands.....	3										50	280,936	5,619
Chile.....	3	3	46		7	45		1			84	906,606	10,793
Colombia.....	34	17	28	3	2	85	6				175	1,443,645	8,249
Costa Rica.....	1										2	4,309	2,154
Cuba.....		71	6	2	26	36					141	906,822	6,431
Cyprus.....	45	15	14	59	68	104	82	42	19		448	5,495,912	12,268
Czechoslovakia.....			1			2		1			4	53,621	13,405
Denmark.....	35	6	2	1	5	12	11	18	10	102	202	5,650,781	27,974
Dominica.....	2										2	2,954	1,477
Dominican Republic.....											2	998	499
East Germany.....	2	2	13	14	22				1		52	405,311	7,794
Ecuador.....	6	51	46	175	63	62	93	35			531	5,307,672	9,996
Egypt.....								2			2	44,204	22,102
El Salvador.....	5										5	5,730	1,146
Finland.....								1			1	24,464	24,464
France.....	15	16				23	11	7			72	761,667	10,579
Ghana.....						4					4	52,016	13,004
Greece.....	79	1	7	7	76	193	117	84	110	4	678	11,240,399	16,579
Guatemala.....											7	28,903	4,129
Honduras.....	5	1	7	4	4						14	66,149	4,725
Hong Kong.....					2	14		11	10	6	43	1,053,491	24,500
India.....					2	3	7	67	4	3	26	636,134	24,467
Israel.....											67	1,786,701	26,667
Italy.....			9		6	8	17	57	1		98	1,889,868	19,284
Japan.....	245	32	104	107	38	90	237	181	91	42	1,167	16,458,153	14,103
Jordan.....						3					3	38,922	12,974
Kuwait.....							12				12	184,794	15,400
Liberia.....	9	4	18	40	131	191	307	260	227	38	1,225	25,075,674	20,470
Malaysia.....		1					3	2	9		15	382,639	25,509
Malta.....		2			1	1	2	5	2		13	259,485	19,960
Mexico.....	3		2			17	35	11	48		120	2,771,237	23,094

Morocco	3	20	9	30	54	1	14	4	30,812	7,703
Netherlands	29	44	1	1	1	35	1	239	2,630,959	11,008
New Guinea	1	1	1	1	1	1	1	1	1,190	1,190
New Zealand	3	1	1	1	1	1	1	4	15,430	3,858
Nicaragua	1	2	1	1	1	1	1	3	18,414	6,138
Nigeria	1	1	1	1	1	1	1	1	13,197	13,197
North Korea	1	1	1	1	1	1	1	1	9,160	9,160
Norway	2	177	127	6	5	36	8	74	1,621,850	21,917
Panama	170	189	3	265	451	300	279	2,467	40,304,380	16,337
People's Republic of China	1	1	1	1	1	1	1	106	2,495,523	23,543
Peru	10	37	11	3	29	35	19	139	1,487,855	10,704
Philippines	8	9	21	4	41	45	76	305	6,214,564	20,376
Poland	2	13	24	25	14	8	3	99	856,935	8,656
Portugal	1	1	29	1	1	1	1	29	207,263	7,147
Qatar	1	1	1	1	1	1	1	2	30,250	15,125
Rumania	1	1	1	1	1	1	1	4	88,048	22,012
Saint Vincent	1	2	1	1	1	1	1	7	100,794	14,399
Samoa	1	1	1	1	1	1	1	3	31,650	10,550
Saudi Arabia	1	1	1	1	1	1	1	4	67,746	16,936
Sierra Leone	1	1	1	1	1	1	1	1	964	964
Singapore	1	3	10	39	47	11	74	250	5,098,676	20,395
Somali Republic	1	1	1	1	1	1	1	2	21,086	10,543
South Korea	14	11	20	8	22	24	60	174	4,085,481	23,480
Spain	14	11	6	12	16	1	1	80	517,258	6,466
Sri Lanka	1	1	1	22	1	1	8	31	432,339	13,946
Sweden	1	1	1	1	2	28	11	63	1,799,664	28,566
Switzerland	2	1	1	1	55	1	6	69	907,784	13,156
Taiwan	9	1	1	2	1	1	58	184	5,995,796	32,586
Thailand	1	1	1	1	1	1	1	1	16,125	16,125
Toga	1	1	1	1	1	1	1	4	16,959	4,240
Turkey	2	1	5	1	6	4	4	25	335,268	13,411
United Arab Emirates	1	1	1	1	1	1	1	1	15,135	15,135
United Kingdom	14	1	25	9	43	57	129	393	8,870,763	22,572
United States	308	16	3	14	125	100	40	656	6,347,085	9,675
U.S.S.R.	29	65	69	118	130	56	26	635	5,748,311	9,052
Vanuatu	12	1	1	7	8	2	1	30	236,185	7,873
Venezuela	104	7	2	10	15	1	1	138	401,646	2,910
West Germany	1	52	19	8	33	100	17	268	3,565,467	13,304
Yugoslavia	1	1	1	1	1	1	1	67	1,007,482	15,037
Total	1,241	702	724	833	2,111	1,813	1,894	12,198	190,717,144	15,635
Percent of Total	10.2	5.8	5.9	6.8	17.3	14.9	15.5	457	3.7	100.0

¹ Includes only commercial vessels of 300 net tons and over, Panama Canal measurement.

² Excludes 24 vessels paying tolls on displacement tonnage basis and 8 transits where no registered tonnage was reported.

Statistics compiled by Office of Executive Planning.

Table 7.—Principal Commodities Shipped Through Canal by Fiscal Years

Commodity	South Atlantic to Pacific		North Pacific to Atlantic	
	1985	1986	1987	1985
Canned and Refrigerated Foods	459	589	3,513	3,202
Canned Foods	73	112	89	126
Fish	3	3	20	28
Fruit	7	24	18	31
Milk	48	72	43	50
Other and unclassified	15	13	8	18
Refrigerated Foods	386	477	3,424	3,020
Bananas .....	.....	9	965	1,001
Dairy Products .....	.....	7	30	38
Fish	113	141	795	691
Fruit, excluding bananas	34	69	827	667
Meat	7	11	62	35
Other and unclassified	224	236	745	682
Chemicals and Petroleum Chemicals	3,855	3,723	980	922
Caustic Soda	714	786	4	.....
Chemicals, unclassified	2,305	2,236	897	855
Petroleum Chemicals, miscellaneous	837	700	78	68
Coal and Coke (excluding petroleum coke)	8,553	7,534	2,020	2,672
Grains	20,843	20,417	2,432	2,521
Barley	55	115	592	579
Corn	8,132	8,622	.....	23
Oats	38	32	38	1
Rice	93	28	344	345
Sorghum	2,269	2,253	.....	25
Soybeans	6,382	6,830	31	8
Wheat	3,742	2,378	1,356	1,464
Other and unclassified	133	160	71	75
Lumber and Products	582	763	7,782	6,156
Boards and planks	11	9	4,128	3,406
Plywood, veneers, composition board	21	28	1,023	787
Pulpwood	514	715	1,795	1,649
Other and unclassified	37	11	835	314
Machinery and Equipment	556	555	2,387	2,352

[Thousands of long tons]

Agricultural machinery and implements.....	47	43	54	18	17	23
Automobiles, trucks, accessories and parts.....	342	342	341	2,120	2,083	1,589
Construction machinery and equipment.....	66	99	79	156	147	113
Electrical machinery and apparatus.....	24	28	36	24	23	39
Motorcycles, bicycles and parts.....	2	3	2	6	8	4
Other and unclassified.....	59	40	44	63	74	54
Manufactures of Iron and Steel.....	3,346	2,538	2,725	3,626	4,162	5,092
Angles, shapes, and sections.....	203	240	150	301	226	426
Nails, tacks, and spikes.....	3	12	6	50	60	67
Plates, sheets, and coils.....	2,005	1,162	1,244	1,495	1,706	1,822
Tubes, pipes, and fittings.....	91	148	136	248	713	921
Wire, bars, and rods.....	643	570	595	291	368	279
Other and unclassified.....	401	406	594	1,241	1,089	1,578
Minerals, miscellaneous.....	261	235	225	4,851	4,590	4,194
Asbestos.....	16	22	21	3	5	2
Borax.....	3	1	.....	379	400	415
Intusorial earth.....	.....	3	.....	22	1	3
Salt.....	118	101	77	1,110	748	524
Soda and sodium compounds.....	115	84	109	112	70	198
Sulfur.....	8	24	16	3,226	3,365	3,051
Nitrates, Phosphates, and Potash.....	9,888	7,572	9,530	2,114	2,376	2,331
Ammonium compounds.....	781	695	653	16	11	15
Fishmeal.....	2	1	2	1,296	1,408	1,297
Nitrate of soda.....	27	22	34	265	245	240
Phosphates.....	6,269	4,925	6,764	242	338	376
Potash.....	347	213	186	81	140	335
Fertilizers, unclassified.....	2,462	1,716	1,891	213	234	67
Ores and Metals.....	3,569	4,367	3,695	5,412	5,420	6,037
Ores.....	717	600	829	4,195	4,065	4,791
Alumina/bauxite.....	114	101	227	732	884	1,145
Chrome.....	7	7	4	22	31	55
Copper.....	35	40	13	725	661	415
Iron.....	61	56	108	526	184	329
Lead.....	.....	5	14	189	148	144
Manganese.....	35	46	101	190	192	170
Tin.....	.....	.....	1	15	30	25
Zinc.....	104	68	73	1,657	566	464
Other and unclassified.....	361	278	288	1,139	1,369	2,044

Table 7.—Principal Commodities Shipped Through Canal by Fiscal Years—Continued

Commodity	South Atlantic to Pacific			North Pacific to Atlantic		
	1985	1986	1987	1987	1986	1985
Metals	2,866	3,768	2,852	1,216	1,357	1,246
Aluminum	256	212	365	51	91	74
Copper	77	10	15	827	911	818
Iron	134	217	30	25	42	7
Lead	5	5	3	50	81	96
Scrap	2,318	3,225	2,390	23	1	5
Tin, including tinplate	11	21	14	11	19	56
Zinc	36	46	14	150	173	156
Other and unclassified	29	31	19	79	40	35
Other Agricultural Commodities	1,384	1,395	1,514	3,346	3,346	3,593
Beans, edible	7	4	30	49	90	57
Cocoa and cacao beans	3	2	2	42	56	76
Coffee, raw and processed	12	10	13	355	381	414
Copra and coconuts	.....	.....	.....	8	9	11
Cotton, raw	12	18	9	77	121	146
Molasses	5	4	7	656	582	781
Oilseeds	67	51	49	238	61	125
Peas, dry	.....	2	.....	44	24	63
Rubber, raw	1	3	3	48	70	98
Skins and hides	2	2	1	.....	1	7
Sugar	1,273	1,299	1,399	1,825	1,941	1,799
Wool, raw	.....	1	1	3	10	17
Petroleum and Products	10,837	11,931	13,093	12,840	18,918	15,936
Asphalt	74	46	139	2	8	1
Crude oil	3,397	2,933	3,393	5,566	10,003	9,029
Diesel oil	1,094	1,119	1,171	199	995	755
Fuel oil, residual	2,378	2,088	1,784	4,118	4,332	3,629
Gasoline	1,206	2,206	2,428	257	574	659
Jet fuel	478	565	1,001	32	51	12
Kerosene	45	86	98	6	14	1
Liquidified gas	713	1,072	1,123	151	71	28
Lubricating oil	610	468	597	253	275	220
Petroleum coke	664	1,203	1,147	2,103	2,445	1,553
Other and unclassified	178	145	213	153	150	52

[Thousands of long tons]

10,908	11,056	12,470	Miscellaneous	10,381	10,591	9,889
41	29	15	Bricks and tile	7	7	13
29	22	6	Carbon black	84	1	5
255	193	249	Cement	3	23	5
417	357	440	Clay, fire and china	27	15	42
9	4	11	Fibers, plant	7	25	6
122	149	191	Flour, wheat	1	1	1
20	28	18	Glass and glassware	5	6	5
36	23	37	Groceries, miscellaneous	46	44	60
23	25	12	Liquors and wines	27	25	21
24	27	21	Marble and stone	2	1	1
2	4	5	Oil, coconut	38	52	54
.....	.....	.....	Oil, fish	125	208	174
190	197	167	Oil, vegetable	114	164	151
854	765	984	Paper and paper products	409	421	461
4	3	2	Porcelainware	3	1	1
312	203	166	Resin	2	9	3
21	20	16	Rubber, manufactured	14	15	34
1	1	.....	Seeds, excluding oilseeds	33	62	12
8	31	15	Slag, clinkers, and dross	.....	7	15
67	93	77	Tallow	23	42	57
65	28	24	Textiles	38	33	38
4	1	3	Tobacco and manufactures	2	2	4
7	5	7	Wax, paraffin	7	5	11
8,397	8,849	10,004	All other and unclassified	9,364	9,421	8,717
74,151	72,675	87,006	Total	61,684	67,270	64,492

Statistics compiled by Office of Executive Planning.

Table 8.—Origin and Destination of Commercial Cargo Through the Panama Canal From Atlantic to Pacific During Fiscal Year 1987
Segregated by Countries in Principal Trade Routes

	[Long tons]				To West Coast Central America									
	To West Coast United States				To W. C. Canada									
	Alaska	Hawaii	Main-land	Total	Canada	Costa Rica	El Salvador	Guatemala	Mexico	Nicaragua	Panama	Central America (other) ¹	Bahoa, R. P. ²	Total
EAST COAST NORTH AMERICA:														
United States:														
North Atlantic ports			5,345	5,345	.....	.....	38,389	17,337	57	.....	2,820	.....	18,930	77,533
South Atlantic ports			1,690	1,690	294,429	21	59	.....	118	.....	19,857	842	14,501	35,397
Great Lakes ports							18,668	.....	36,557	.....	.....	.....	.....	55,225
Gulf ports			638,112	697,459	537,807	302,020	575,402	59,904	1,019,023	1,000	61,301	40,601	254,705	2,313,956
United States (other) ¹			9,758	9,758	.....	9,839	1,812	20,419	.....	.....	5,104	3,032	27,522	67,728
Total United States	27,343	32,004	654,905	714,252	832,236	311,880	634,330	97,660	1,055,754	1,000	89,082	44,475	315,658	2,549,839
EAST COAST CANADA:														
	68	.....	86,337	86,405	30,226	908	.....	.....	22,503	2,273	7,087	.....	.....	32,771
EAST COAST CENTRAL AMERICA:														
Mexico			22,610	22,610	6,679	18,452	354,637	204,195	2,440,965	21,098	1,378	12,804	1,879	3,055,408
Panama							6,842	153	.....	1,731	9,323	.....	26,574	44,623
Central America (other) ¹										207	6,023	.....	.....	6,230
Cristobal, R. P. ²			616	616	.....	.....	71	.....	.....	786	.....	.....	800	1,657
Total Central America			23,226	23,226	6,679	18,452	361,550	204,348	2,440,965	23,822	16,724	12,804	29,253	3,107,918
EAST COAST SOUTH AMERICA:														
Brazil			547,392	547,392	87,028	.....	1,272	.....	.....	851	.....	.....	2,040	4,163
Colombia							456	.....	.....	526	53,917	110	37,562	92,571
Venezuela			329,383	419,606	4,538	50,300	350,403	331,755	.....	3,201	16,727	37,619	40,713	830,718
South America (other) ¹			57,368	57,368	18,948	.....	942	.....	.....	15,286	.....	230	2,012	18,470
Total South America			934,143	1,024,366	110,514	50,300	353,073	331,755	.....	19,864	70,644	37,959	82,327	945,922
WEST INDIES:														
Cuba										61,423	.....	23,529	15	84,967
Jamaica			2,080	2,080	51,181	.....	.....	.....	.....	.....	.....	.....	.....	.....
Netherlands West Indies			134,334	134,334	.....	.....	28,957	.....	.....	53,852	.....	31,701	50,123	164,633
Trinidad/Tobago			33,057	90,393	123,450	22,692	24,971	.....	.....	1,759	20,278	.....	.....	47,008
West Indies (other) ¹			54,297	180,916	235,213	109	.....	.....	.....	1,225	1,286	8,944	33,001	45,265
Total West Indies			407,723	495,077	73,982	24,971	29,077	.....	689	118,259	21,564	64,174	83,139	341,873

EUROPE:

Belgium	463,381	64,718	11,607	48,613	19,424	487	11,112	140	21,415	.....	112,798
France	310,553	20,527	9	5,133	131	8,293	18,623	.....	6,222	10,045	48,456
Italy	217,286	11,874	2,909	5,250	.....	.....	5,878	.....	395	3,374	17,806
Netherlands	407,541	43,438	33,976	4,560	41,090	2,900	19,306	.....	4,251	.....	106,083
Norway	196,643	3,303	.....	17,010	56,021	.....	19,471	.....	.....	.....	92,502
Spain-Portugal	305,482	306,220	65,758	1,747	.....	3,049	5,054	.....	3,744	1,968	22,850
Sweden	125,575	5,433	.....	.....	.....	468	7,597	.....	.....	.....	8,065
United Kingdom	126,943	14,430	1	5,643	447	12,675	6,097	.....	269	.....	25,132
U.S.S.R.	13,873	.....	161	1,541	41,086	106,435	757,998	.....	4,781	.....	912,002
West Germany	436,615	42,054	1,816	11,254	1,148	2,370	15,479	4,609	7,001	.....	43,677
Europe (other) ¹	813,896	103,970	21,879	24,592	92,606	37,846	118,204	7,783	12,470	2,434	317,814
Total Europe	3,417,788	375,705	79,646	125,343	251,953	174,523	984,819	12,532	60,548	17,821	1,707,185

ASIA (MIDDLE EAST):

.....	30,105	269,504	299,609				18,964				18,964
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AFRICA:

.....		205,580	205,580	89	4,092	48,717	6,872				59,770
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GRAND TOTAL

54,019	239,686	5,999,206	6,292,911	1,626,490	486,157	3,743,151	1,175,873	217,633	219,960	528,198	8,764,242
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Percent of Pacific-bound cargo

0.1	0.3	6.9	7.2	1.9	0.6	1.7	1.0	4.3	0.3	0.6	10.1
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Table 8.—Origin and Destination of Commercial Cargo Through the Panama Canal From Atlantic to Pacific During Fiscal Year 1987
Segregated by Countries in Principal Trade Routes—Continued

[Long tons]

	To West Coast South America					To Oceania					
	Chile	Colombia	Ecuador	Peru	South America (other) ¹	Total	Aus- tralia	French Oceania	New Zealand	Oceania (other) ¹	Total
EAST COAST NORTH AMERICA:											
United States:											
North Atlantic ports	199,729	12,584	30,699	141,578	89	384,679	133,518	799	40,289	53,099	227,705
South Atlantic ports	30,591	17,026	109,168	69,829	.....	226,614	111,749	372	234,327	35,429	381,877
Great Lakes ports	5,005	924	19,725	16,146	.....	41,800	.....	.....	.....	.....	.....
Gulf ports	878,748	482,491	640,282	1,130,157	24,481	2,156,159	1,085,520	.....	147,515	101,758	1,334,793
United States (other) ¹	180,746	19,003	66,845	85,840	14,456	366,890	67,352	307	9,141	47,500	124,300
Total United States	1,294,819	532,028	866,719	1,443,550	39,026	4,176,142	1,398,139	1,478	431,272	237,786	2,068,675
EAST COAST CANADA:											
	3,777	28,769	6,943	54,637	6,065	100,191	101,845	292	58,911	36,530	197,578
EAST COAST CENTRAL AMERICA:											
Mexico	18,385	49,422	133,449	37,994	4	239,254	51	.....	18,776	.....	18,827
Panama	25,162	.....	8,081	3,386	.....	36,629	.....	.....	.....	.....	.....
Central America (other) ¹ . . . . .	.....	.....	7,613	.....	.....	7,613	.....	.....	.....	.....	.....
Cristobal, R.P. ² . . . . .	.....	.....	1,353	150	150	1,653	.....	.....	.....	4,000	4,000
Total Central America	43,547	49,422	150,496	41,530	154	285,149	51	.....	18,776	4,000	22,827
EAST COAST SOUTH AMERICA:											
Brazil . . . . .	.....	4,080	35,963	36,654	.....	76,697	544	.....	.....	.....	544
Colombia	10,841	519,992	4,048	62,658	8,250	605,789	.....	.....	.....	.....	.....
Venezuela	1,083,498	28,072	1,007,047	85,541	34,512	2,238,670	11	.....	25,812	.....	25,823
South America (other) ¹	3,031	7,484	4,909	15,415	6,402	37,241	900	.....	10	2,474	3,384
Total South America	1,097,370	559,628	1,051,967	200,268	49,164	2,958,397	1,455	.....	25,822	2,474	29,751
WEST INDIES:											
Cuba . . . . .	.....	.....	688	23,976	656	25,320	.....	.....	.....	.....	.....
Jamaica . . . . .	.....	19	.....	27,441	.....	27,460	22	.....	.....	75	97
Netherlands West Indies	352,314	.....	138,394	5,091	130,978	626,777	1,481	.....	20,939	.....	22,420
Trinidad/Tobago	29,948	14,915	6,439	34,018	.....	80,320	62	.....	.....	141	203
West Indies (other) ¹	25,643	6,843	4,903	82,974	33,779	154,144	1,165	.....	55	4,251	5,471
Total West Indies	402,907	21,777	150,424	173,500	165,413	914,021	2,730		20,994	4,467	28,191

EUROPE:																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					</
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Table 8.—Origin and Destination of Commercial Cargo Through the Panama Canal From Atlantic to Pacific During Fiscal Year 1987
Segregated by Countries in Principal Trade Routes—Continued

	To Asia										Grand total	Percent of total Pacific-bound cargo	
	China	Taiwan	Hong Kong	Indonesia	Japan	Philippine Islands	Singapore	South Korea	Thailand	U.S.S.R. (other) ¹			Total
[Long tons]													
EAST COAST NORTH AMERICA:													
United States:													
North Atlantic ports.....	179,157	963,710	177,047	1,134	1,755,558	70,671	123,273	1,960,796	6,730	13,090	313,421	5,564,587	7.2
South Atlantic ports.....	276,297	340,501	246,819	21,650	838,253	29,188	73,375	197,399	5,408	.....	234,512	2,283,402	3.7
Great Lakes ports.....	15,157	14,110	.....	.....	44,010	.....	.....	127,785	16,004	.....	3,246	220,312	0.4
Gulf ports.....	2,774,976	7,083,139	100,767	57,170	22,628,748	338,602	140,622	5,739,047	42,771	331,028	1,020,732	40,257,776	55.5
United States (other) ¹	155,125	329,385	136,486	20,712	661,462	12,155	54,199	278,707	199	.....	511,989	2,160,419	3.1
Total United States.....	3,400,712	8,730,845	661,119	100,666	25,948,031	450,616	391,469	8,303,734	71,112	344,118	2,083,900	50,486,322	69.9
EAST COAST CANADA:													
468,290	210,813	18,991	.....	454,927	24,378	.....	.....	282,823	19,852	.....	191,287	1,671,361	2.4
EAST COAST CENTRAL AMERICA:													
Mexico.....	44,901	38,891	1,583	16,991	136,975	3,483	27,908	15,942	104,019	.....	100,324	501,017	4.4
Panama.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.1
Central America (other) ¹.....	.....	.....	.....	.....	3,259	.....	.....	.....	.....	.....	968	4,227	0.0
Cristobal, R.P. ².....	.....	3,100	8	.....	7,378	.....	.....	.....	.....	.....	2,299	12,785	0.0
Total Central America.....	44,901	41,991	1,591	16,991	147,612	3,483	27,908	15,942	104,019	.....	113,591	518,029	4.6
EAST COAST SOUTH AMERICA:													
Brazil.....	52,061	1,738	2,154	.....	231,653	.....	1,056	.....	.....	.....	111	288,773	1.2
Colombia.....	13,883	.....	.....	.....	77,372	.....	.....	.....	.....	.....	7,365	98,620	0.9
Venezuela.....	126,897	7,760	90,298	.....	676,100	.....	.....	45,864	20,408	.....	2,277	969,604	5.2
South America (other) ¹	11,212	2,423	1,302	.....	43,852	.....	411	5,381	.....	.....	1,549	66,130	0.2
Total South America.....	204,053	11,921	93,754	.....	1,028,977	.....	1,467	51,245	20,408	.....	11,302	1,423,127	7.5
WEST INDIES:													
Cuba.....	395,814	.....	.....	.....	369,037	.....	418	11,121	.....	140,756	64,383	981,529	1.3
Jamaica.....	432	57,470	22,961	.....	54,408	168	19,157	29,453	.....	.....	81,233	265,282	0.4
Netherlands West Indies.....	.....	.....	.....	.....	.....	773	3,656	.....	.....	.....	6,851	11,280	1.1
Trinidad/Tobago.....	.....	23,551	.....	.....	151,959	.....	.....	.....	.....	.....	43	175,553	0.5
West Indies (other) ¹.....	.....	21,504	.....	.....	96,202	.....	.....	44,185	.....	.....	8,553	170,444	0.7
Total West Indies.....	396,246	102,525	22,961	.....	672,379	168	23,231	84,759	.....	140,756	161,063	1,604,088	4.0

EUROPE:											
Belgium	151	98	.....	.....	1,967	.....	.....	4,607	.....	.....	151
France	16,284	.....	.....	.....	4,347	.....	.....	3,827	.....	.....	119
Italy	212	88	67	.....	140	.....	.....	66	.....	.....	.....
Netherlands	1,500	34,254	1,188	.....	98,249	1,123	3,233	12,083	4,962	.....	92,181
Norway	4,974	.....	.....	.....	11,282	.....	.....	.....	.....	.....	.....
Spain-Portugal .....	.....	182	712	.....	756	.....	.....	202	.....	.....	8,035
Sweden	696	.....	.....	.....	34	.....	.....	171	.....	.....	.....
United Kingdom	200	22,000	.....	.....	14,055	1,527	5,539	849	2,008	.....	11,326
U.S.S.R. ....	.....	.....	.....	.....	24,753	.....	.....	.....	.....	.....	845
West Germany	248	5,285	4	.....	12,207	.....	8,974	5,242	.....	.....	.....
Europe (other)	15,562	1,659	193	.....	56,019	.....	41	21,102	.....	.....	18,329
Total Europe	39,827	63,566	2,164	.....	223,809	2,650	17,787	48,149	6,970	431	130,986
ASIA (MIDDLE EAST):											
.....	.....	112	247	.....	110	.....	.....	154	.....	.....	5,457
AFRICA:											
.....	.....	4,304	1,644	.....	38,243	.....	2,262	539	.....	.....	2,868
GRAND TOTAL	4,554,029	9,166,077	802,471	117,657	28,514,088	481,295	464,124	8,787,345	222,361	485,305	2,700,454
Percent of Pacific-bound cargo	5.2	10.5	0.9	0.1	32.8	0.6	0.5	10.1	0.3	0.6	3.1
											64.7
											100.0

¹ Includes cargo not routed to permit segregation between definite countries.

² Includes both local and transshipped cargo.

Statistics compiled by Office of Executive Planning.

Table 9.—Origin and Destination of Commercial Cargo Through the Panama Canal From Pacific to Atlantic During Fiscal Year 1987
Segregated by Countries in Principal Trade Routes

[Long tons]

	To East Coast United States					To E. C. Canada		To East Coast Central America					
	North Atlantic ports	South Atlantic ports	Great Lakes ports	Gulf ports	United States (other) ¹	Total	Canada	Mexico	Panama	Central America (other) ¹	Cristobal R. P. ²	Total	
WEST COAST NORTH AMERICA:													
United States:													
Alaska				246,397	.....	246,397	.....	.....	.....	.....	.....	.....	.....
Hawaii	78,972			310,339	33,354	422,665	.....	.....	.....	.....	.....	.....	.....
Mainland	220,121	23,540		944,333	36,235	1,224,229	102,299	.....	.....	1,386	29,865	31,251	.....
Total United States	299,093	23,540		1,501,069	69,589	1,893,291	102,299	.....	.....	1,386	29,865	31,251	.....
WEST COAST CANADA													
	766,212	477,527	24,332	736,589	413,096	2,417,756	4	46,841	.....	.....	.....	46,841	.....
WEST COAST CENTRAL AMERICA:													
Costa Rica	8,669	732		23,605	13,700	46,706	.....	.....	143	.....	266	11,518	.....
El Salvador	5,670			47,558	10,050	63,278	.....	.....	.....	.....	.....	.....	.....
Guatemala	105,715	29,518		54,134	13,433	202,800	.....	.....	.....	99	56	155	.....
Honduras				2,774		2,774	.....	.....	.....	.....	.....	.....	.....
Mexico	273,896			147,578	26,362	447,836	19,958	305,626	.....	173	553	306,352	.....
Nicaragua				98	.....	98	.....	.....	.....	.....	.....	.....	.....
Panama	43,715	5,730		79,362	2,985	131,792	.....	.....	.....	.....	.....	.....	.....
Central America (other) ¹				11,434	295	11,729	.....	682	.....	.....	110	792	.....
Balboa, R. P. ²		268		35,451		35,719	.....	.....	.....	591	.....	591	.....
Total Central America	437,665	36,248		401,994	66,825	942,732	22,486	306,451	.....	18,091	1,268	325,810	.....
WEST COAST SOUTH AMERICA:													
Chile	937,211	133,702		532,382	150,780	1,754,075	62,980	29,937	5,612	.....	864	36,413	.....
Colombia	74,793	17,104		262,599	96,129	450,625	710	139	33,244	67,263	.....	100,646	.....
Ecuador	1,393,863	110,714		1,514,914	95,690	3,115,181	1,012	1,326	342,058	62,316	18,652	424,352	.....
Peru	1,528,663	147,920		154,266		194,962	72,473	26,575	55,305	.....	.....	81,880	.....
South America (other) ¹	22,144	3,374		16,223	22,525	64,266	400	69	.....	.....	412	481	.....
Total South America	3,956,674	412,814		2,480,384	560,086	7,409,958	137,575	58,046	436,219	129,579	19,928	543,772	.....

OCEANIA:

Australia	391,356	49,904	56,627	1,573,087	112,664	2,183,638	487,329	102,807	.....	763	103,570
British Oceania	21,554	.....	.....	.....	.....	21,554	.....	.....	.....	.....	.....
French Oceania	12,306	.....	.....	2,500	1,412	16,218	.....	308	.....	.....	308
New Zealand	176,112	29,062	.....	232,832	14,792	452,798	37,163	13,949	.....	1,789	15,738
Oceania (other)	54,939	21,355	.....	13,639	73,552	163,485	30,394	.....	.....	.....	.....
Total Oceania	656,267	100,321	56,627	1,822,058	202,420	2,837,693	554,886	116,756	308	2,552	119,616

ASIA:

China	135,305	13,287	21,996	724,946	10,258	905,792	38,648	.....	.....	42	42
Taiwan	781,577	333,276	26	55,662	304,565	1,475,106	74,795	112	.....	1,053	17,230
Hong Kong	254,499	145,979	.....	6,276	71,286	478,040	59,954	.....	.....	984	15,257
Indonesia	122,814	49,523	.....	203,980	176,714	553,031	.....	.....	.....	.....	.....
Japan	2,720,201	1,155,497	234,668	2,031,536	671,521	6,813,423	95,332	384	400	2,416	43,817
Philippine Islands	210,022	33,679	.....	51,013	140,086	434,800	8,500	.....	.....	.....	43
Singapore	185,540	101,009	.....	35,493	42,722	364,764	23,777	.....	.....	.....	3,288
South Korea	394,849	140,725	2,365	255,304	264,163	1,057,406	35,080	213	.....	1,543	11,449
Thailand	11,732	8,474	.....	1,592	10,575	32,373	.....	.....	.....	.....	.....
U.S.S.R. .....	.....	.....	.....	.....	.....	.....	6,390	.....	.....	.....	.....
Asia (other) ¹	805,623	396,015	.....	266,959	257,206	1,725,803	88,108	.....	.....	8,666	121,260
Total	5,622,162	2,377,464	259,055	3,632,761	1,949,096	13,840,538	430,584	709	400	14,662	212,386
GRAND TOTAL	11,738,073	3,427,914	340,014	10,574,855	3,261,112	29,341,968	1,247,834	528,803	436,927	163,718	265,999
Percent of Atlantic-bound cargo	19.0	5.6	0.6	17.1	5.3	47.6	2.0	0.9	0.7	0.3	0.4

¹ See footnotes at end of table.

Table 9.—Origin and Destination of Commercial Cargo Through the Panama Canal From Pacific to Atlantic During Fiscal Year 1987
Segregated by Countries in Principal Trade Routes—Continued

[Long tons]													
To East Coast South America					To West Indies								
Brazil		Colom- bia	Vene- zuela	South America (other) ¹	Total	Cuba	Haiti/ Domi- can Republic	Jamaica	Nether- lands West Indies	Puerto Rico	Trini- dad/ Tobago (other) ¹	West Indies (other) ¹	Total
WEST COAST NORTH AMERICA:													
United States:													
Alaska					900								
Hawaii					5,367	163,667							
Mainland					114,313		580	2,345	369,445	71,312		495,047	938,729
Total United States					114,313	5,367	580	2,345	369,445	71,312		495,047	938,729
WEST COAST CANADA					250,024	99,815	453,218	39,743	28,387		42,844		110,974
WEST COAST CENTRAL AMERICA:													
Costa Rica					35				5,071		634		5,705
El Salvador					326	627			3,093	13,469			16,569
Guatemala									9,842			9,869	19,711
Honduras												2,005	20,514
Mexico					140,109		146,173	6,300	36	1	38	15,118	429
Nicaragua					1,170		1,583	10,598					10,598
Panama							800	1,405					40,959
Central America (other) ¹							19,987	740					101,683
Balboa, R. P. ²													
Total Central America					141,640	627	170,271	37,931	18,007	13,507	11,874	21,112	239,666
WEST COAST SOUTH AMERICA:													
Chile						17,941	130,401						95,732
Colombia						82,210	86,392			2,036			35,322
Ecuador							8,204				9,768		1,277,240
Peru						5,693	1,310		150,159	79,957	1,034,919	1,824	10,381
South America (other) ¹							82,325	10,949	550		517,261		645,195
Total South America						13,580	16,084	33,434	1,000	6,000	1,135		124
Total South America					5,693	119,594	323,406	44,383	78,790	87,993	1,602,532	11,592	118,183
													2,095,182

OCEANIA:

Australia	7,382	10,305	.....	17,687	675	5,931	334	334	.....	4,875	2,952	16,101
British Oceania .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
French Oceania .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	618
New Zealand .....	.....	29,571	.....	29,571	6,402	9,809	2,556	136	.....	2,362	7,886	29,151
Oceania (other) .....	.....	.....	.....	.....	.....	.....	.....	.....	19,778	.....	6,672	26,450
Total Oceania	7,382	39,876	.....	47,258	7,077	15,740	2,890	470	20,396	7,237	18,510	72,320

ASIA:

China	8,267	12,884	.....	21,151	147,021	.....	.....	.....	13,913	.....	.....	160,934
Taiwan	1,043	104	2,914	4,578	.....	4,286	78,593	2,173	12,813	1,648	6,406	105,919
Hong Kong	1,229	116	3,971	5,709	.....	1,589	33,400	2,208	2,611	450	2,174	42,432
Indonesia .....	.....	.....	.....	.....	.....	.....	.....	.....	60,487	.....	.....	60,487
Japan	23,097	39,099	185,928	13,940	262,064	21,340	36,996	57,778	104,914	9,844	39,407	290,102
Philippine Islands .....	.....	.....	.....	.....	.....	.....	.....	.....	19,823	.....	.....	.....
Singapore	88	6	11,735	5	11,834	893	765	6,202	47	8	.....	63
South Korea	703	107	4,212	982	6,004	.....	6,107	29,978	343	3,783	376	571
Thailand .....	.....	.....	.....	.....	.....	.....	.....	.....	484	4,834	1,368	9,027
U.S.R. ....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4,921
Asia (other) ¹	18,573	10,385	45,472	22,373	96,803	25,897	44,634	65,223	8,688	53,576	73,115	290,711
Total	53,000	49,817	267,116	38,210	408,143	490,783	94,377	271,174	33,766	256,939	25,950	283,397
GRAND TOTAL	564,670	282,602	785,345	53,926	1,686,543	619,917	189,711	474,512	505,181	2,131,034	56,653	4,760,568

Percent of Atlantic-bound cargo 0.9 0.5 1.3 0.1 2.7 1.0 0.3 0.8 0.8 3.5 0.1 1.3 7.7

¹ See footnotes at end of table.

Table 9. —Origin and Destination of Commercial Cargo Through the Panama Canal From Pacific to Atlantic During Fiscal Year 1987
Segregated by Countries in Principal Trade Routes—Continued

[Long tons]

	To Europe													
	Belgium	Den- mark	Finland	France	Italy	Nether- lands	Spain/ Portugal	Sweden	United Kingdom	U.S.S.R.	Yugo- slavia	West Germany	Europe (other) ¹	Total
WEST COAST NORTH AMERICA:														
United States:														
Alaska	105,428	.....	.....	34,255	27,460	5,616	.....	1,820	1,649	.....	.....	5,672	176,382	358,282
Hawaii .....	.....	.....	.....	.....	.....	86,374	.....	.....	.....	.....	.....	.....	.....	86,374
Mainland	451,036	68,433	10,480	194,515	354,267	1,796,280	506,095	153,331	152,785	6,437	766	157,462	1,177,734	5,029,621
Total United States	556,464	68,433	10,480	228,770	381,727	1,888,270	506,095	155,151	154,434	6,437	766	163,134	1,354,116	5,474,277
WEST COAST CANADA	683,608	8,252	21,949	318,640	458,162	778,989	262,876	177,217	1,275,381	104,751	29,453	189,066	2,044,499	6,352,843
WEST COAST CENTRAL AMERICA:														
Costa Rica .....	.....	.....	.....	.....	.....	.....	236	.....	.....	47,791	.....	3,673	2,505	54,205
El Salvador	1,170	.....	.....	2	833	170	3,486	.....	66	14,852	.....	44,174	8,257	73,010
Guatemala .....	.....	.....	.....	.....	567	21,576	.....	.....	.....	29,602	.....	3,641	53,263	108,649
Honduras .....	.....	.....	.....	.....	264	.....	5,276	.....	.....	.....	.....	.....	16,205	21,745
Mexico	23,463	.....	9,599	3,171	15,245	28,900	117,909	3,329	3,207	.....	.....	108,529	54,591	367,943
Nicaragua	86,813	.....	.....	.....	482	695	2,134	.....	53	51,778	.....	14,003	13,356	169,314
Panama .....	.....	.....	.....	1,682	31,603	3,000	9,670	.....	.....	.....	428	2,771	4,752	53,906
Central America (other) ¹	6,131	.....	.....	.....	3,354	.....	2,666	.....	.....	12,142	.....	9,571	2,553	36,417
Balboa, R.P. ² .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total Central America	117,577	.....	9,599	4,855	52,348	54,341	141,377	3,329	3,326	156,165	428	186,362	155,482	885,189
WEST COAST SOUTH AMERICA:														
Chile	293,742	3,405	14,261	118,092	218,766	437,991	118,300	171,474	176,292	.....	35,516	523,934	415,610	2,527,383
Colombia	22,008	.....	.....	1,348	1,371	42,498	729	1,028	13,768	11,810	2,669	172,078	8,056	277,363
Ecuador	74,849	.....	.....	5,555	57,576	30,555	14,886	3,097	6,507	25,157	19,872	139,141	127,216	504,411
Peru .....	.....	.....	.....	.....	123,771	48,647	20,261	21,168	84,708	114,192	133,218	206,399	301,902	1,367,917
South America (other) ¹	4,582	.....	.....	26,460	22,145	27,272	10,254	.....	4,611	377,165	1,464	8,665	112,219	594,837
Total South America	640,962	3,405	14,261	219,325	423,629	586,963	164,430	196,767	285,886	528,324	192,739	1,050,217	965,003	5,271,911

OCEANIA:

Australia	26,803	2,262	3,213	12,644	17,221	14	28,840	43,364	18,184	152,545
British Oceania							153,659	156		153,815
French Oceania	7,542	59,599	3,026	2,422	194		9	220	23,172	96,184
New Zealand	155,314	1,072	3,084	100,862	596	8,144	67,737	16,931	55,719	415,572
Oceania (other)	10,996	107	1,248	3,914	15,199		19,240	138,605	21,432	210,741
Total Oceania	200,655	1,072	10,571	119,842	33,210	8,158	269,485	199,276	118,507	1,028,357

ASIA:

China	2,941							3,732		6,673
Taiwan			12	1,490	105				4,344	5,951
Hong Kong				650	34		6	62	814	1,566
Indonesia										
Japan	12,441	560	2,803	76,994	552	1,675	8,419	12,861	1,881	118,478
Philippine Islands				23,423						23,423
Singapore				4,159	21		981	98	95	4,414
South Korea			80	12,677				217	355	14,331
Thailand										
U.S.R.										
Asia (other)	38	55		3,926	4	14	254			8,132
Total	15,420	2,920	384	123,319	716	1,689	9,660	17,183	4,062	8,566
GRAND TOTAL	2,214,686	80,650	57,361	3,551,724	1,108,704	542,311	1,998,172	1,805,238	4,649,158	19,204,611

Percent of Atlantic-bound cargo

See footnotes at end of table.

Table 9.—Origin and Destination of Commercial Cargo Through the Panama Canal From Pacific to Atlantic During Fiscal Year 1987
Segregated by Countries in Principal Trade Routes—Continued

[Long tons]

	To Asia (Middle East)		To Africa					Grand Total	Percent of total Atlantic- bound cargo	
	Asia (Middle East)		Algeria	Egypt	Morocco	Africa	Tunisia (other) ¹			Total
WEST COAST NORTH AMERICA:										
United States:										
Alaska .....	.....	.....	.....	1,950	.....	.....	.....	1,950	606,629 1.0	
Hawaii .....	.....	.....	.....	.....	.....	.....	.....	.....	509,939 0.8	
Mainland	144,040	.....	.....	792,001	115,693	36,712	76,399	1,119,034	8,872,550 14.4	
Total United States	144,040	.....	.....	793,951	115,693	36,712	76,399	1,120,984	9,989,118 16.2	
WEST COAST CANADA										
.....	368,828	31,549	.....	295,865	1,317,451	120,674	376,095	64,494	2,206,128 11,956,592 19.4	
WEST COAST CENTRAL AMERICA:										
•										
Costa Rica .....	.....	.....	.....	.....	.....	.....	.....	.....	118,169 0.2	
El Salvador .....	.....	.....	.....	.....	.....	.....	.....	.....	153,810 0.2	
Guatemala .....	.....	.....	.....	.....	.....	.....	.....	.....	331,315 0.5	
Honduras .....	.....	.....	.....	.....	.....	.....	.....	.....	52,482 0.1	
Mexico	4,249	.....	.....	1,968	.....	.....	.....	.....	1,316,401 2.1	
Nicaragua .....	.....	.....	.....	.....	.....	.....	.....	.....	190,523 0.3	
Panama	32,748	.....	.....	.....	.....	.....	1,434	1,434	261,639 0.4	
Central America (other) ¹ .....	.....	.....	.....	.....	.....	.....	62	62	171,410 0.3	
Balboa, R.P. ² .....	.....	.....	.....	.....	.....	.....	.....	.....	36,310 0.1	
Total Central America	36,997	.....	.....	1,968	.....	.....	6,940	8,908	2,632,059 4.2	
WEST COAST SOUTH AMERICA:										
Chile	18,644	.....	.....	591	1,039	.....	.....	3,829	4,629,457 7.5	
Colombia .....	.....	.....	.....	.....	27,559	370	.....	27,929	978,987 1.6	
Ecuador	13,939	3,425	.....	.....	68	.....	.....	5,498	5,349,837 8.7	
Peru	11,401	69,369	.....	.....	.....	.....	.....	71,369	4,358,371 7.0	
South America (other) ¹ .....	.....	.....	.....	.....	.....	.....	.....	.....	717,761 1.2	
Total South America	43,984	72,794	.....	591	28,666	370	.....	6,204	108,625 16,034,413 26.0	

**Table 10.—Important Commodity Shipments Over Principal Trade Routes
Atlantic to Pacific**

[Thousands of long tons]

	Fiscal year		
	1987	1986	1985
EAST COAST UNITED STATES TO WEST COAST UNITED STATES:			
Canned and refrigerated foods, miscellaneous		1	5
Chemicals and petroleum chemicals	308	238	327
Caustic soda	80	76	93
Chemicals, unclassified	111	76	116
Toluene	50	.....	6
Petroleum chemicals, miscellaneous	67	86	112
Grains	51	.....	.....
Corn	51	.....	.....
Machinery and equipment, miscellaneous	20	2	.....
Manufactures of iron and steel	9	9	.....
Other and unclassified	9	9	.....
Nitrates, phosphates, and potash .....	.....	.....	38
Ammonium compounds .....	.....	.....	16
Phosphates .....	.....	.....	22
Ores and metals .....	.....	32	.....
Ore, alumina/bauxite .....	.....	32	.....
Petroleum and products	278	947	530
Fuel oil, residual	28	81	37
Gasoline	86	479	147
Jet fuel .....	.....	184	28
Lubricating oil	162	169	260
Petroleum coke .....	.....	.....	57
Other and unclassified	2	34	1
Miscellaneous	16	311	466
All other and unclassified	16	311	466
Total	682	1,540	1,366
EAST COAST UNITED STATES TO WEST COAST CANADA:			
Nitrates, phosphates, and potash	819	603	808
Phosphates	819	603	808
Miscellaneous	13	25	10
All other and unclassified	13	25	10
Total	832	628	818
EAST COAST UNITED STATES TO WEST COAST CENTRAL AMERICA:			
Chemicals and petroleum chemicals, miscellaneous	11	8	16
Coal .....	.....	138	322
Grains	1,177	476	760
Corn	443	80	95
Sorghum	103	.....	131
Soybeans	288	134	294
Wheat	331	238	236
Other and unclassified	12	24	4
Lumber and products, miscellaneous	10	9	.....
Machinery and equipment, miscellaneous	1	.....	.....
Manufactures of iron and steel, miscellaneous	11	.....	2
Minerals, miscellaneous	31	.....	.....
Soda and sodium compounds	31	.....	.....
Nitrates, phosphates, and potash	726	660	490

**Table 10.—Important Commodity Shipments Over Principal Trade Routes
Atlantic to Pacific—Continued**

[Thousands of long tons]

	Fiscal year		
	1987	1986	1985
EAST COAST UNITED STATES TO WEST COAST			
CENTRAL AMERICA—Continued			
Nitrates, phosphates, and potash—Continued			
Ammonium compounds	146	148	116
Fertilizers, unclassified	103	107	136
Phosphates	466	382	219
Potash	11	23	19
Ores and metals	22	.....	.....
Other agricultural commodities	42	34	59
Oilseeds	42	34	59
Petroleum and products	152	113	171
Diesel oil	80	42	37
Gasoline	49	29	13
Fuel oil, residual .....	.....	2	94
Lubricating oil	6	1	6
Petroleum products, miscellaneous	17	39	21
Miscellaneous	51	98	64
Flour, wheat .....	.....	2	1
Oil, vegetable	8	23	6
Paper and paper products .....	.....	15	17
Tallow	18	39	22
All other and unclassified	25	19	18
Total	2,234	1,536	1,884
EAST COAST UNITED STATES TO WEST COAST			
SOUTH AMERICA:			
Canned and refrigerated foods, miscellaneous	21	33	23
Chemicals and petroleum chemicals	296	302	231
Caustic soda	113	108	61
Chemicals, unclassified	163	178	164
Petroleum chemicals, miscellaneous	20	16	6
Coal and coke	174	108	162
Grain	1,668	1,656	1,772
Corn	473	257	91
Oats	4	5	1
Rice	29	2	37
Sorghum .....	.....	22	85
Soybeans	221	103	154
Wheat	941	1,262	1,403
Other and unclassified .....	.....	5	1
Lumber and products	7	7	8
Pulpwood	5	7	4
Other and unclassified	2	.....	4
Machinery and equipment	60	59	52
Agricultural machinery and implements	17	16	15
Automobiles, trucks, accessories, and parts	16	18	14
Construction machinery and equipment	17	13	14
Electrical machinery and apparatus	5	8	6
Other and unclassified	5	4	3
Manufactures of iron and steel	23	33	26
Angles, shapes, and sections	6	6	5
Plates, sheets, and coils	4	7	5
Tubes, pipes, and fittings	9	11	7
Wire, bars, and rods	2	4	3
Other and unclassified	2	5	6

**Table 10.—Important Commodity Shipments Over Principal Trade Routes
Atlantic to Pacific—Continued**

[Thousands of long tons]

	<i>Fiscal year</i>		
	1987	1986	1985
EAST COAST UNITED STATES TO WEST COAST SOUTH AMERICA—Continued			
Minerals, miscellaneous	19	17	45
Soda and sodium compounds	14	6	36
Sulfur	5	7	7
Other and unclassified .....	.....	4	2
Nitrates, phosphates, and potash	738	482	445
Ammonium compounds	18	32	13
Fertilizers, unclassified	370	150	147
Phosphates	275	281	261
Potash	75	19	24
Ores and metals	175	89	158
Ores, miscellaneous	26	15	26
Metals	149	74	132
Scrap	146	68	127
Tin, including tinplate .....	.....	3	3
Other and unclassified	3	3	2
Other agricultural commodities	75	90	5
Oilseeds	2	1	4
Sugar	73	83	.....
Other and unclassified .....	.....	6	1
Petroleum and products	108	134	256
Diesel oil	27	16	65
Gasoline	4	8	75
Jet fuel .....	.....	23	.....
Liquified gas	13	5	52
Lubricating oil	61	57	25
Residual fuel oil .....	.....	14	29
Other and unclassified	3	11	10
Miscellaneous	812	636	577
Bricks and tile	2	3	3
Carbon black	1	1	1
Clay, fire, and china	10	16	13
Flour, wheat	56	27	15
Groceries, miscellaneous	3	5	2
Oil, coconut	4	3	1
Oil, vegetable	23	41	54
Paper and paper products	143	147	111
Resin	39	52	36
Rubber, manufactured	5	4	4
Tallow	42	40	33
Textiles	11	11	7
All other and unclassified	473	286	297
Total	<u>4,176</u>	<u>3,646</u>	<u>3,760</u>
EAST COAST UNITED STATES TO BALBOA, R.P.:			
Canned and refrigerated foods, miscellaneous	2	6	9
Chemicals and petroleum chemicals, miscellaneous	14	16	13
Grains	122	96	84
Corn	23	24	33
Wheat	89	70	51
Soybeans	10	2	.....
Machinery and equipment, miscellaneous .....	.....	.....	1
Ores and metals, miscellaneous	4	9	7

**Table 10.—Important Commodity Shipments Over Principal Trade Routes
Atlantic to Pacific—Continued**

[Thousands of long tons]

	Fiscal year		
	1987	1986	1985
EAST COAST UNITED STATES TO BALBOA,			
R.P.—Continued			
Petroleum and products	109	45	169
Diesel	23	.....	63
Fuel oil, residual	83	34	98
Other and unclassified	3	11	8
Miscellaneous	65	77	115
Oil, vegetable .....	.....	1	11
All other and unclassified	65	76	104
Total	316	249	398
EAST COAST UNITED STATES TO HAWAII:			
Petroleum and products	32	.....	.....
Jet fuel	32	.....	.....
Miscellaneous .....	.....	26	46
All other and unclassified .....	.....	26	46
Total	32	26	46
EAST COAST UNITED STATES TO OCEANIA:			
Chemicals and petroleum chemicals	576	523	519
Caustic soda	458	443	430
Chemicals, unclassified	107	79	82
Petroleum chemicals, miscellaneous	11	1	7
Coal and coke .....	.....	51	.....
Grains	34	41	48
Rice .....	.....	1	.....
Soybeans	34	40	48
Other and unclassified .....	.....	.....	.....
Lumber and products	26	7	2
Pulpwood	26	7	2
Machinery and equipment	1	3	11
Agricultural machinery and implements .....	.....	1	1
Automobiles, trucks, accessories and parts	1	.....	4
Construction machinery and equipment .....	.....	2	5
Other and unclassified .....	.....	.....	1
Manufactures of iron and steel, miscellaneous .....	.....	3	.....
Minerals, miscellaneous .....	.....	8	10
Nitrates, phosphates, and potash	579	403	743
Ammonium compounds	17	12	10
Fertilizers, unclassified	172	97	191
Phosphates	374	263	510
Potash	16	31	32
Petroleum and products	313	263	338
Diesel oil .....	.....	39	44
Gasoline	121	58	5
Jet fuel	11	10	2
Liquefied gas	63	71	105
Lubricating oil	28	15	23
Residual fuel oil .....	.....	3	.....
Petroleum coke	85	64	156
Other and unclassified	5	13	5
Miscellaneous	540	470	445
Clay, fire and china	31	24	24
Oil, vegetable	2	1	3

**Table 10.—Important Commodity Shipments Over Principal Trade Routes
Atlantic to Pacific—Continued**

[Thousands of long tons]

	<i>Fiscal year</i>		
	1987	1986	1985
EAST COAST UNITED STATES TO OCEANIA—			
Continued			
Miscellaneous—Continued			
Paper and products	13	22	18
Resin .....	.....	1	1
All other and unclassified	494	422	399
Total	<u>2,069</u>	<u>1,772</u>	<u>2,116</u>
EAST COAST UNITED STATES TO ASIA:			
Canned and refrigerated foods	262	166	111
Canned foods, miscellaneous .....	.....	.....	3
Refrigerated foods	262	166	108
Fruit	115	67	28
Meat .....	.....	.....	1
Other and unclassified	147	99	79
Chemicals and petroleum chemicals	2,846	1,973	1,919
Caustic soda	151	63	41
Chemicals, unclassified	1,860	1,404	1,340
Benzene	58	7	.....
Toulene	133	1	2
Petroleum chemicals, miscellaneous	644	498	536
Coal and coke	5,669	7,000	7,990
Grains	26,277	17,665	17,731
Barley	110	106	31
Corn	14,881	8,215	7,853
Rice	15	.....	1
Sorghum	2,521	2,223	2,033
Soybeans	7,098	6,413	5,725
Wheat	1,452	623	1,984
Other and unclassified	200	85	104
Lumber and products	510	400	284
Pulpwood	510	400	279
Other and unclassified .....	.....	.....	5
Machinery and equipment	29	41	49
Agricultural machinery and implements	2	3	5
Automobiles, trucks, accessories and parts	2	3	5
Construction machinery and equipment	4	19	14
Electrical machinery and apparatus	3	1	6
Other and unclassified	18	15	19
Manufactures of iron and steel	199	56	41
Angles, shapes, and sections	11	8	1
Plates, sheets, and coils	100	.....	9
Wires, bars, and rods	22	3	.....
Other and unclassified	66	45	31
Minerals, miscellaneous	7	39	4
Nitrates, phosphates, and potash	4,521	3,384	5,193
Ammonium compounds	60	8	122
Fertilizers, unclassified	343	137	249
Phosphates	4,011	3,187	4,810
Potash	107	52	12
Ores and metals	2,028	2,942	2,149
Ores, miscellaneous	47	54	64
Metals	1,981	2,888	2,085
Aluminum .....	.....	.....	1
Iron .....	.....	.....	24

**Table 10.—Important Commodity Shipments Over Principal Trade Routes
Atlantic to Pacific—Continued**

[Thousands of long tons]

	Fiscal year		
	1987	1986	1985
EAST COAST UNITED STATES TO ASIA—			
Continued			
Ores and metals—Continued			
Scrap	1,971	2,877	2,048
Tin, including tinplate .....	.....	1	1
Other and unclassified	10	10	11
Other agricultural commodities	181	1	6
Beans, edible	28	.....	2
Cotton, raw .....	.....	.....	4
Sugar	150	.....	.....
Other and unclassified	3	1	.....
Petroleum and products	2,062	1,824	821
Gasoline	414	120	3
Kerosene	26	60	.....
Liquefied gas	192	324	130
Lubricating oil	114	81	71
Petroleum coke	1,061	1,106	447
Diesel .....	.....	29	.....
Residual fuel oil .....	.....	82	50
Jet fuel	225	.....	28
Other and unclassified	30	22	92
Miscellaneous	5,895	4,929	4,678
Bricks and tile .....	.....	.....	1
Carbon black .....	.....	17	24
Clay, fire and china	369	312	364
Fibers, plant	1	.....	6
Flour, wheat .....	.....	13	4
Groceries, miscellaneous	22	1	16
Marble and stone	8	5	9
Oil, vegetable	71	63	70
Paper and paper products	355	166	184
Resin	40	78	181
Rubber, manufactured	1	5	7
Tallow	6	5	2
Textiles	2	6	50
Tobacco and manufactures	3	.....	4
All other and unclassified	5,017	4,258	3,756
Total	50,486	40,420	40,976
EAST COAST CANADA TO WEST COAST UNITED STATES:			
Manufactures of iron and steel	45	.....	.....
Plates, sheets, and coils	45	.....	.....
Ores and metals	35	.....	.....
Ores, miscellaneous	30	.....	.....
Metals, miscellaneous	5	.....	.....
Miscellaneous	6	35	19
Paper and products .....	.....	16	11
All other and unclassified	6	19	8
Total	86	35	19
EAST COAST CANADA TO WEST COAST CENTRAL AMERICA:			
Grains, miscellaneous	22	30	.....
Manufactures of iron and steel, miscellaneous .....	.....	7	24

**Table 10.—Important Commodity Shipments Over Principal Trade Routes
Atlantic to Pacific—Continued**

[Thousands of long tons]

	Fiscal year		
	1987	1986	1985
EAST COAST CANADA TO WEST COAST CENTRAL AMERICA—Continued			
Manufactures of iron and steel, miscellaneous—Continued			
Miscellaneous	11	37	20
Paper and paper products	7	13	11
All other and unclassified	4	24	9
Total	33	74	44
EAST COAST CANADA TO WEST COAST SOUTH AMERICA:			
Canned and refrigerated foods, miscellaneous	19	11	3
Grains	11	.....	.....
Wheat	11	.....	.....
Lumber and products	4	1	.....
Pulpwood	4	1	.....
Machinery and equipment, miscellaneous	2	2	.....
Manufactures of iron and steel, miscellaneous	2	2	.....
Minerals, miscellaneous	9	14	9
Asbestos	9	14	9
Nitrates, phosphates, and potash	16	.....	12
Potash	16	.....	12
Ores and metals .....	.....	.....	1
Metals .....	.....	.....	1
Tin, including tinplate .....	.....	.....	1
Miscellaneous	37	38	64
Paper and paper products	19	17	33
Resin	4	.....	1
All other and unclassified	14	21	30
Total	100	68	89
EAST COAST CANADA TO OCEANIA:			
Canned and refrigerated foods, miscellaneous	6	2	3
Lumber and products	35	23	.....
Pulpwood	35	23	.....
Machinery and equipment	1	.....	.....
Minerals, miscellaneous	21	6	.....
Nitrates, phosphates and potash	15	.....	.....
Potash	15	.....	.....
Ores and metals	27	4	8
Ores, miscellaneous	25	4	8
Metals	2	.....	.....
Iron	2	.....	.....
Miscellaneous	93	68	98
Paper and paper products	35	23	.....
All other and unclassified	58	45	98
Total	198	103	109
EAST COAST CANADA TO ASIA:			
Canned and refrigerated foods	40	75	51
Canned foods, miscellaneous .....	.....	7	.....
Refrigerated foods	40	68	51

**Table 10.—Important Commodity Shipments Over Principal Trade Routes
Atlantic to Pacific—Continued**

[Thousands of long tons]

	Fiscal year		
	1987	1986	1985
EAST COAST CANADA TO ASIA—Continued			
Canned and refrigerated foods—Continued			
Fish	22	32	23
Other and unclassified	18	36	28
Chemicals and petroleum chemicals, miscellaneous	5	7	5
Grains	289	248	107
Soybeans	106	122	79
Wheat	174	101	.....
Other and unclassified	9	25	28
Lumber and products	240	204	185
Pulpwood	228	204	185
Other and unclassified	12	.....	.....
Machinery and equipment, miscellaneous	5	6	2
Manufactures of iron and steel, miscellaneous	265	31	25
Ores and metals	318	451	355
Ores, miscellaneous	70	54	48
Metals	248	397	307
Aluminum	2	14	45
Copper	6	2	59
Iron	16	98	48
Scrap	222	241	124
Other and unclassified	2	42	31
Miscellaneous	509	528	796
Flour, wheat	83	51	50
Paper and paper products	127	86	193
Resin	34	23	59
All other and unclassified	265	368	494
Total	<u>1,671</u>	<u>1,550</u>	<u>1,526</u>
EAST COAST CENTRAL AMERICA TO WEST COAST CENTRAL AMERICA:			
Nitrates, phosphates, and potash	398	414	536
Ammonium compounds	142	188	45
Phosphates	22	.....	86
Fertilizers, unclassified	234	226	405
Petroleum and products	2,655	3,042	3,022
Asphalt	8	8	49
Crude oil	624	561	745
Diesel oil	118	256	111
Liquefied gas	509	441	327
Fuel oil, residual	1,376	1,580	1,734
Gasoline	1	196	17
Other and unclassified	19	.....	39
Miscellaneous	25	10	24
All other and unclassified	25	10	24
Total	<u>3,078</u>	<u>3,466</u>	<u>3,582</u>
EAST COAST CENTRAL AMERICA TO WEST COAST SOUTH AMERICA:			
Nitrates, phosphates, and potash	6	11	2
Fertilizers, unclassified	6	11	2
Other agricultural commodities	12	.....	.....
Sugar	12	.....	.....

**Table 10.—Important Commodity Shipments Over Principal Trade Routes
Atlantic to Pacific—Continued**

[Thousands of long tons]

	Fiscal year		
	1987	1986	1985
EAST COAST CENTRAL AMERICA TO WEST COAST SOUTH AMERICA—Continued			
Petroleum and products	171	201	138
Other and unclassified	171	201	138
Miscellaneous	94	79	46
All other and unclassified	94	79	46
Total	283	291	186
EAST COAST CENTRAL AMERICA TO BALBOA, R.P.:			
Petroleum and products	27	63	104
Diesel oil	11	10	30
Fuel oil, residual	16	53	73
Other and unclassified .....	.....	.....	1
Miscellaneous	1	1	.....
All other and unclassified	1	1	.....
Total	28	64	104
EAST COAST CENTRAL AMERICA TO ASIA:			
Chemicals and petroleum chemicals, miscellaneous	26	34	19
Manufactures of iron and steel, miscellaneous	282	.....	12
Nitrates, phosphates, and potash .....	.....	14	18
Fertilizers, unclassified .....	.....	14	18
Ores and metals, miscellaneous	46	68	90
Other agricultural commodities	1	26	2
Coffee	1	1	2
Sugar .....	.....	25	.....
Miscellaneous	150	123	109
All other and unclassified	150	123	109
Total	505	265	238
EAST COAST SOUTH AMERICA TO WEST COAST UNITED STATES:			
Canned and refrigerated foods, miscellaneous	13	23	9
Chemicals and petroleum chemicals, miscellaneous	1	29	77
Lumber and products, miscellaneous	42	41	26
Manufactures of iron and steel, miscellaneous	479	405	648
Ores and metals	35	89	76
Ores	29	34	74
Alumina/bauxite	28	34	64
Other and unclassified	1	.....	10
Metals, miscellaneous	6	55	2
Other agricultural commodities	2	.....	9
Cocoa and cacao beans .....	.....	.....	1
Coffee	2	.....	8
Petroleum and products	253	109	93
Asphalt	82	.....	.....
Diesel oil	29	53	22
Gasoline	81	55	28
Jet fuel	61	.....	42
Petroleum products, miscellaneous .....	.....	1	1
Miscellaneous	109	123	142
Paper and products	21	14	9
All other and unclassified	88	109	133
Total	934	819	1,080

**Table 10.—Important Commodity Shipments Over Principal Trade Routes
Atlantic to Pacific—Continued**

[Thousands of long tons]

	Fiscal year		
	1987	1986	1985
EAST COAST SOUTH AMERICA TO WEST COAST			
CANADA:			
Manufactures of iron and steel, miscellaneous	51	50	26
Miscellaneous	60	28	18
All other and unclassified	60	28	18
Total	111	78	44
EAST COAST SOUTH AMERICA TO WEST COAST			
CENTRAL AMERICA:			
Coal		54	77
Grains	3	1	49
Sorghum			21
Soybeans		1	28
Other and unclassified	3		
Manufactures of iron and steel, miscellaneous	75	30	18
Nitrates, phosphates, and potash	8	3	17
Fertilizers, unclassified	8	3	17
Petroleum and products	757	601	687
Crude oil	716	558	659
Other and unclassified	41	43	28
Other agricultural commodities		31	
Sugar		31	
Miscellaneous	21	61	12
All other and unclassified	21	61	12
Total	864	781	860
EAST COAST SOUTH AMERICA TO WEST COAST			
SOUTH AMERICA:			
Chemicals and petroleum chemicals, miscellaneous	26	16	8
Grains	1	2	1
Oats	1	2	1
Manufactures of iron and steel, miscellaneous	39	31	170
Minerals, miscellaneous	16	14	7
Salt	12	13	6
Soda and sodium compounds	4	1	1
Nitrates, phosphates, and potash	137	176	91
Fertilizers, unclassified	137	176	91
Ores and metals	49	29	13
Ore, alumina/bauxite	8	10	6
Metals, miscellaneous	41	19	7
Other agricultural commodities	40	11	
Other and unclassified	40	11	
Petroleum and products	2,563	1,696	1,582
Crude oil	1,602	1,115	1,133
Diesel oil	179	174	77
Fuel oil, residual	29	35	32
Gasoline	513	249	271
Jet fuel	28	23	9
Liquefied gas	96	24	
Lubricating oil	48	37	42
Other and unclassified	68	39	18
Miscellaneous	87	96	44
All other and unclassified	87	96	44
Total	2,958	2,070	1,916

**Table 10.—Important Commodity Shipments Over Principal Trade Routes
Atlantic to Pacific—Continued**

[Thousands of long tons]

	Fiscal year		
	1987	1986	1985
EAST COAST SOUTH AMERICA TO BALBOA, R.P.:			
Petroleum and products	77	61	71
Diesel oil	24	35	65
Gasoline	14	26	1
Fuel oil, residual	39	.....	5
Miscellaneous	5	2	7
All other and unclassified	5	2	7
Total	82	63	78
EAST COAST SOUTH AMERICA TO HAWAII:			
Petroleum and products	90	92	60
Jet fuel	90	92	60
Total	90	92	60
EAST COAST SOUTH AMERICA TO OCEANIA:			
Petroleum and products, miscellaneous	26	.....	29
Miscellaneous	4	4	3
All other and unclassified	4	4	3
Total	30	4	32
EAST COAST SOUTH AMERICA TO ASIA:			
Canned and refrigerated foods, miscellaneous	59	38	15
Chemicals and petroleum chemicals, miscellaneous	10	35	70
Coal and coke	59	177	.....
Grains, miscellaneous .....	.....	3	53
Lumber and products, miscellaneous	12	23	42
Manufactures of iron and steel, miscellaneous	420	361	357
Nitrates, phosphates, and potash	1	2	.....
Fertilizers, unclassified	1	2	.....
Ores and metals	382	269	364
Ores	79	93	146
Alumina/bauxite	10	12	14
Iron	56	32	64
Manganese	4	31	66
Other and unclassified	9	18	2
Metals	303	176	218
Aluminum	293	170	200
Other and unclassified	10	6	18
Other agricultural commodities	10	21	5
Cotton, raw .....	.....	4	3
Other and unclassified	10	17	2
Petroleum and products	382	163	632
Crude oil .....	.....	.....	508
Diesel oil .....	.....	.....	29
Gasoline	113	.....	34
Jet fuel	87	85	61
Liquefied gas	150	78	.....
Other and unclassified	32	.....	.....
Miscellaneous	88	37	29
All other and unclassified	88	37	29
Total	1,423	1,129	1,567

**Table 10.—Important Commodity Shipments Over Principal Trade Routes
Atlantic to Pacific—Continued**

[Thousands of long tons]

	<i>Fiscal year</i>		
	1987	1986	1985
WEST INDIES TO WEST COAST UNITED STATES:			
Chemicals and petroleum chemicals, miscellaneous		11	
Manufactures of iron and steel, miscellaneous	19	5	30
Minerals, miscellaneous		27	38
Salt		27	38
Nitrates, phosphates and potash, miscellaneous	35	56	63
Ores and metals	7	5	57
Ore, alumina/bauxite	7	5	57
Petroleum and products	254	227	166
Asphalt	25		
Fuel oil, residual		36	
Gasoline	105	139	43
Jet fuel	29	29	106
Lubricating oil	46	23	17
Other and unclassified	49		
Miscellaneous	93	6	
All other and unclassified	93	6	
Total	408	337	354
WEST INDIES TO WEST COAST CENTRAL AMERICA:			
Chemicals and petroleum chemicals, miscellaneous		5	1
Other agricultural commodities			3
Sugar			3
Petroleum and products	169	41	135
Crude oil	35		
Diesel oil	71	28	44
Fuel oil, residual	34		8
Gasoline	22	7	54
Kerosene			15
Lubricating oil	1	1	5
Other and unclassified	6	5	9
Miscellaneous	90	73	71
Cement	8	2	15
All other and unclassified	82	71	56
Total	259	119	210
WEST INDIES TO WEST COAST SOUTH AMERICA:			
Nitrates, phosphates and potash, miscellaneous	53	12	41
Other agricultural commodities, miscellaneous	24	25	
Minerals, miscellaneous		2	2
Sulfur		2	2
Ores and metals		9	13
Ores, miscellaneous		9	8
Metals, miscellaneous			5
Petroleum and products	822	462	567
Diesel oil	356	267	232
Fuel oil, residual	51	33	76
Gasoline	266	87	138
Jet fuel	104	45	16
Kerosene	9	5	7
Lubricating oil	32	25	98
Other and unclassified	4		

**Table 10.—Important Commodity Shipments Over Principal Trade Routes
Atlantic to Pacific—Continued**

[Thousands of long tons]

	Fiscal year		
	1987	1986	1985
WEST INDIES TO WEST COAST SOUTH AMERICA—			
Continued			
Miscellaneous	15	23	7
All other and unclassified	15	23	7
Total	914	533	630
WEST INDIES TO BALBOA, R.P.:			
Petroleum and products	77	6	64
Diesel oil	46	3	55
Fuel oil, residual	5	.....	3
Gasoline	26	3	1
Other and unclassified .....	.....	.....	5
Miscellaneous	6	2	.....
All other and unclassified	6	2	.....
Total	83	8	64
WEST INDIES TO HAWAII:			
Petroleum and products	87	.....	115
Jet fuel	87	.....	61
Residual fuel oil .....	.....	.....	54
Total	87	.....	115
WEST INDIES TO OCEANIA:			
Minerals, miscellaneous	20	49	26
Salt	20	49	26
Petroleum and products	3	20	57
Gasoline .....	.....	20	29
Lubricating oil	2	.....	5
Other and unclassified	1	.....	23
Miscellaneous	5	8	.....
All other and unclassified	5	8	.....
Total	28	77	83
WEST INDIES TO ASIA:			
Canned and refrigerated foods	24	18	14
Fish, refrigerated	16	17	10
Other and unclassified	8	1	4
Chemicals and petroleum chemicals, miscellaneous	94	48	71
Ores and metals	30	13	46
Ores	28	10	46
Alumina/bauxite	28	10	43
Other and unclassified .....	.....	.....	3
Metals, miscellaneous	2	3	.....
Other agricultural commodities	953	1,117	1,264
Sugar	953	1,115	1,264
Other and unclassified .....	.....	2	.....
Petroleum and products	192	73	54
Crude oil .....	.....	.....	10
Gasoline	94	24	.....
Jet fuel	68	49	.....
Lubricating oil	6	.....	44
Petroleum products, miscellaneous	24	.....	.....

**Table 10.—Important Commodity Shipments Over Principal Trade Routes
Atlantic to Pacific—Continued**

[Thousands of long tons]

	Fiscal year		
	1987	1986	1985
WEST INDIES TO ASIA—Continued			
Miscellaneous	311	304	164
All other and unclassified	311	304	164
Total	1,604	1,573	1,613
EUROPE TO WEST COAST UNITED STATES:			
Canned and refrigerated foods, miscellaneous	78	57	64
Chemicals and petroleum chemicals	51	54	99
Caustic soda	16	5	10
Chemicals, unclassified	35	49	89
Lumber and products, miscellaneous	20	19	21
Machinery and equipment	224	233	246
Automobiles, trucks, accessories and parts	217	212	226
Construction machinery and equipment	1	11	8
Electrical machinery and apparatus	2	2	5
Other and unclassified	4	8	7
Manufactures of iron and steel	568	784	729
Angles, shapes, and sections	38	103	69
Plates, sheets, and coils	312	362	389
Tubes, pipes, and fittings	19	57	48
Wires, bars, and rods	77	93	63
Other and unclassified	122	169	160
Nitrates, phosphates, and potash	345	334	358
Ammonium compounds	119	117	119
Fertilizers, unclassified	194	192	210
Nitrate of soda	23	21	28
Other and unclassified	9	4	1
Ores and metals	123	27	82
Ores, miscellaneous	115	2	56
Metals	8	25	26
Iron .....	.....	15	20
Other and unclassified	8	10	6
Petroleum and products	236	270	252
Diesel oil	19	.....	.....
Fuel oil, residual	52	.....	.....
Gasoline	63	235	248
Jet fuel	66	.....	.....
Other and unclassified	36	35	4
Miscellaneous	1,799	1,617	1,623
Bricks and tile	4	15	25
Cement	227	137	207
Glass and glassware	1	1	1
Liquors and wines	8	19	6
Marble and stone	1	7	7
Paper and paper products	130	149	181
Rubber, manufactured .....	.....	2	1
All other and unclassified	1,428	1,287	1,195
Total	3,444	3,395	3,474
EUROPE TO WEST COAST CANADA:			
Canned and refrigerated foods, miscellaneous	12	8	6
Machinery and equipment	13	22	16
Automobiles, trucks, accessories and parts	13	20	15
Other and unclassified .....	.....	2	1

**Table 10.—Important Commodity Shipments Over Principal Trade Routes
Atlantic to Pacific—Continued**

[Thousands of long tons]

	Fiscal year		
	1987	1986	1985
EUROPE TO WEST COAST CANADA—Continued			
Manufactures of iron and steel.....	135	135	193
Angles, shapes, and sections.....	5	10	15
Plates, sheets, and coils.....	40	44	84
Tubes, pipes, and fittings.....	6	16	25
Wire, bars, and rods.....	38	24	26
Other and unclassified.....	46	41	43
Nitrates, phosphates, and potash.....	.....	.....	8
Fertilizers, unclassified.....	.....	.....	8
Ores and metals, miscellaneous.....	48	94	11
Miscellaneous.....	168	163	166
Bricks and tile.....	1	3	3
Liquors and wines.....	.....	2	2
All other and unclassified.....	167	158	161
Total.....	376	422	400
EUROPE TO WEST COAST CENTRAL AMERICA:			
Canned and refrigerated foods, miscellaneous.....	32	26	17
Chemicals and petroleum chemicals, miscellaneous....	54	48	29
Grains.....	73	97	128
Corn.....	1	6	5
Rice.....	9	24	55
Wheat.....	42	60	51
Other and unclassified.....	21	7	17
Machinery and equipment.....	48	44	55
Automobiles, trucks, accessories and parts.....	20	20	22
Other and unclassified.....	28	24	33
Manufactures of iron and steel.....	142	120	90
Angles, shapes, and sections.....	12	19	24
Plates, sheets, and coils.....	65	43	30
Tubes, pipes, and fittings.....	2	2	4
Wire, bars, and rods.....	58	44	23
Other and unclassified.....	5	12	9
Nitrates, phosphates, and potash.....	567	437	327
Ammonium compounds.....	95	45	47
Fertilizers, unclassified.....	470	378	262
Potash.....	2	14	18
Ores and metals.....	11	15	28
Metals, miscellaneous.....	11	15	28
Petroleum and products.....	607	638	415
Crude petroleum.....	416	492	342
Other and unclassified.....	191	146	73
Other agricultural commodities.....	.....	1	.....
Sugar.....	.....	1	.....
Miscellaneous.....	155	159	143
Cement.....	1	1	1
Glass and glassware.....	1	3	1
Paper and paper products.....	18	19	17
All other and unclassified.....	135	136	124
Total.....	1,689	1,585	1,232
EUROPE TO WEST COAST SOUTH AMERICA:			
Canned and refrigerated foods.....	42	27	26
Canned foods.....	24	15	17

**Table 10.—Important Commodity Shipments Over Principal Trade Routes
Atlantic to Pacific—Continued**

[Thousands of long tons]

	Fiscal year		
	1987	1986	1985
EUROPE TO WEST COAST SOUTH AMERICA—			
Continued			
Canned and refrigerated foods—Continued			
Milk	22	12	.....
Other and unclassified	2	3	17
Refrigerated foods	18	12	9
Dairy products	6	1	3
Other and unclassified	12	11	6
Chemicals and petroleum chemicals	29	46	59
Caustic soda	9	12	10
Chemicals, unclassified	18	33	48
Petroleum chemicals, miscellaneous	2	1	1
Grains	122	40	41
Barley	14	.....	5
Oats	3	18	4
Wheat	65	5	17
Rice	7	.....	.....
Other and unclassified	33	17	15
Lumber and products	1	.....	.....
Pulpwood	1	.....	.....
Machinery and equipment	61	57	71
Agricultural machinery and implements	14	10	13
Automobiles, trucks, accessories and parts	20	15	19
Construction machinery and equipment	12	20	19
Electrical machinery and apparatus	8	7	12
Other and unclassified	7	5	8
Manufactures of iron and steel	276	200	149
Angles, shapes, and sections	34	31	31
Plates, sheets, and coils	123	45	60
Tubes, pipes, and fittings	12	9	11
Wire, bars, and rods	82	78	36
Other and unclassified	25	37	11
Minerals, miscellaneous	24	23	43
Soda and sodium compounds	21	20	39
Other and unclassified	3	3	4
Nitrates, phosphates, and potash	435	237	116
Ammonium compounds	77	28	26
Fertilizers, unclassified	287	197	57
Phosphates	30	9	7
Potash	41	2	25
Other and unclassified .....	.....	1	1
Ores and metals	50	119	132
Ores, miscellaneous	39	89	120
Metals	11	30	12
Iron .....	.....	19	1
Tin, including tinplate	4	4	1
Other and unclassified	7	7	10
Other agricultural commodities	156	7	10
Sugar	148	3	2
Other and unclassified	8	4	8
Petroleum and products	127	182	119
Diesel oil	3	52	76
Gasoline	5	24	.....
Jet fuel	11	.....	.....
Kerosene	25	.....	.....

**Table 10.—Important Commodity Shipments Over Principal Trade Routes
Atlantic to Pacific—Continued**

[Thousands of long tons]

	Fiscal year		
	1987	1986	1985
EUROPE TO WEST COAST SOUTH AMERICA—			
Continued			
Petroleum and products—Continued			
Lubricating oil	37	36	1
Liquefied gas	33	27	.....
Residual fuel oil	13	43	37
Other and unclassified .....	.....	.....	5
Miscellaneous	804	636	613
Ammunition and explosives	2	3	1
Bricks and tile	3	4	.....
Cement	4	40	.....
Flour, wheat	31	17	23
Glass and glassware	3	6	6
Groceries, miscellaneous	5	9	7
Liquors and wines .....	.....	1	.....
Oil, vegetable	1	.....	3
Paper and paper products	51	32	49
Resin	3	2	6
Rubber, manufactured	2	2	1
Textiles	3	5	3
Wax, paraffin	5	2	3
All other and unclassified	691	513	511
Total	2,079	1,574	1,379
EUROPE TO OCEANIA:			
Canned and refrigerated foods, miscellaneous	15	11	13
Chemicals and petroleum chemicals	135	120	139
Caustic soda	56	34	33
Chemicals, unclassified	68	79	96
Petroleum chemicals, miscellaneous	11	7	10
Lumber and products, miscellaneous	9	32	3
Machinery and equipment	32	27	22
Agricultural machinery and implements	3	2	1
Automobiles, trucks, accessories and parts	22	15	16
Construction machinery and equipment	4	8	2
Electrical machinery and apparatus	3	2	1
Other and unclassified .....	.....	.....	2
Manufactures of iron and steel	41	30	22
Angles, shapes, and sections	10	3	.....
Plates, sheets, and coils	15	7	7
Tubes, pipes, and fittings	5	7	5
Wire, bars, and rods	9	8	6
Other and unclassified	2	5	4
Minerals, miscellaneous	6	7	9
Salt	4	5	6
Soda and sodium compounds	2	2	3
Nitrates, phosphates, and potash	57	38	82
Ammonium compounds	35	19	26
Fertilizers, unclassified	8	6	33
Phosphates .....	.....	1	1
Potash	14	12	22
Ores and metals, miscellaneous	2	16	2
Other agricultural commodities, miscellaneous	3	4	4
Petroleum and products	86	36	19
Lubricating oil	11	9	9
Gasoline	71	1	1

**Table 10.—Important Commodity Shipments Over Principal Trade Routes
Atlantic to Pacific—Continued**

[Thousands of long tons]

	<i>Fiscal year</i>		
	1987	1986	1985
EUROPE TO OCEANIA—Continued			
Petroleum and products—Continued			
Other and unclassified	4	26	9
Miscellaneous	634	464	465
Bricks and tile	3	1	2
Cement	10	14	13
Flour, wheat	14	11	8
Glass and glassware	4	2	2
Groceries, miscellaneous	1	1	1
Liquors and wines	1	1	2
Oil, vegetable	11	14	16
Paper and paper products	12	19	5
Rubber, manufactured .....	.....	1	1
Textiles	1	.....	1
All other and unclassified	577	400	414
Total	1,020	785	780
EUROPE TO ASIA:			
Canned and refrigerated foods	17	15	26
Refrigerated foods, miscellaneous	17	15	26
Chemicals and petroleum chemicals	301	177	218
Caustic soda	4	7	21
Chemicals, unclassified	261	139	161
Benzene	11	1	.....
Petroleum chemicals, miscellaneous	25	30	36
Lumber and products, miscellaneous	8	.....	.....
Machinery and equipment	14	30	10
Automobiles, trucks, accessories and parts	13	22	7
Other and unclassified	1	8	3
Manufactures of iron and steel, miscellaneous	29	.....	56
Nitrates, phosphates, and potash	25	2	.....
Potash	25	2	.....
Ores and metals, miscellaneous	32	.....	14
Petroleum and products, miscellaneous	12	34	34
Miscellaneous	98	29	69
Paper and paper products	5	.....	2
All other and unclassified	93	29	67
Total	536	287	427
AFRICA TO WEST COAST UNITED STATES:			
Canned and refrigerated foods, miscellaneous .....	.....	2	3
Manufactures of iron and steel, miscellaneous	146	155	82
Ores and metals	18	34	35
Metals	3	10	14
Other and unclassified	3	10	14
Ores	15	24	21
Manganese ore	6	5	16
Other and unclassified	9	19	5
Petroleum and products	31	207	37
Crude oil .....	.....	207	.....
Gasoline	4	.....	37
Jet fuel	27	.....	.....

**Table 10.—Important Commodity Shipments Over Principal Trade Routes
Atlantic to Pacific—Continued**

[Thousands of long tons]

	Fiscal year		
	1987	1986	1985
AFRICA TO WEST COAST UNITED STATES—			
Continued			
Miscellaneous	11	14	16
All other and unclassified	11	14	16
Total	206	412	173
AFRICA TO WEST COAST CANADA:			
Manufactures of iron and steel, miscellaneous		1	4
Nitrates, phosphates, and potash	195	78	35
Phosphates	195	78	35
Miscellaneous	2	14	4
All other and unclassified	2	14	4
Total	197	93	43
AFRICA TO WEST COAST SOUTH AMERICA:			
Manufactures of iron and steel, miscellaneous		11	
Nitrates, phosphates, and potash	80		
Fertilizers, unclassified	70		
Phosphates	10		
Petroleum and products, miscellaneous	5	50	4
Miscellaneous	7	7	4
All other and unclassified	7	7	4
Total	92	68	8
AFRICA TO ASIA:			
Canned and refrigerated foods	34	40	38
Fish, refrigerated	34	39	38
Other and unclassified		1	
Miscellaneous	16		
All other and unclassified	16		
Total	50	40	38
ASIA (MIDDLE EAST) TO WEST COAST UNITED STATES:			
Chemicals and petroleum chemicals			1
Grains			54
Soybeans			54
Petroleum and products	230	328	26
Gasoline	230	328	26
Miscellaneous	40	46	47
All other and unclassified	40	46	47
Total	270	374	128

**Table 11.—Important Commodity Shipments Over Principal Trade Routes
Pacific to Atlantic**

[Thousands of long tons]

	Fiscal year		
	1987	1986	1985
WEST COAST UNITED STATES TO EAST COAST UNITED STATES:			
Chemicals and petroleum chemicals	48	44	94
Chemicals, unclassified	48	40	85
Petroleum chemicals, miscellaneous		4	9
Lumber and products		1	.....
Petroleum and products	1,317	2,996	2,271
Crude oil	984	1,847	1,766
Diesel oil	40	259	91
Fuel oil, residual	103	539	79
Gasoline	5	102	144
Lubricating oil	139	179	142
Other and unclassified	46	70	49
Miscellaneous	106	391	513
All other and unclassified	106	391	513
Total	1,471	3,432	2,950
WEST COAST UNITED STATES TO EAST COAST CANADA:			
Petroleum and products	101	273	269
Residual fuel oil		13	36
Diesel oil		99	80
Jet fuel		26	.....
Lubricating oil	11	.....	.....
Petroleum coke	90	135	153
Miscellaneous	1	2	2
All other and unclassified	1	2	2
Total	102	275	271
WEST COAST UNITED STATES TO EAST COAST SOUTH AMERICA:			
Canned and refrigerated foods	8	1	3
Canned foods, miscellaneous	4	.....	3
Refrigerated foods	4	1	.....
Other and unclassified	4	1	.....
Chemicals and petroleum chemicals, miscellaneous	1	.....	.....
Coke, coal type	10	.....	.....
Grains .....	.....	28	.....
Other and unclassified .....	.....	28	.....
Lumber and products	57	20	24
Pulpwood	57	20	24
Machinery and equipment, miscellaneous	2	.....	.....
Minerals, miscellaneous	40	65	40
Borax .....	.....	5	2
Salt	3	3	.....
Soda and sodium compounds	37	56	38
Infusorial earth .....	.....	1	.....
Nitrates, phosphates, and potash	5	16	.....
Nitrate of soda .....	.....	15	.....
Ammonium compounds .....	.....	1	.....
Fertilizers, unclassified	5	.....	.....
Ores and metals	2	.....	.....
Metals, miscellaneous	2	.....	.....

**Table 11.—Important Commodity Shipments Over Principal Trade Routes
Pacific to Atlantic—Continued**

[Thousands of long tons]

	Fiscal year		
	1987	1986	1985
WEST COAST UNITED STATES TO EAST COAST SOUTH AMERICA—Continued			
Other agricultural commodities	3	5	10
Beans, edible .....	.....	3	6
Cotton	1	.....	.....
Peas, dried	1	2	4
Petroleum and products	58	99	15
Petroleum coke	58	71	15
Diesel oil .....	.....	28	.....
Miscellaneous	97	71	62
Clay, fire and china	6	.....	5
Tallow	6	7	.....
Oil, vegetable .....	.....	.....	3
Paper and paper products	14	16	12
All other and unclassified	71	48	42
Total	283	305	154
WEST COAST UNITED STATES TO WEST INDIES:			
Canned and refrigerated foods, miscellaneous	1	.....	3
Grains	70	127	67
Rice	70	127	67
Petroleum and products	865	996	883
Diesel oil	51	181	277
Gasoline .....	.....	20	.....
Jet fuel	32	3	12
Residual fuel oil	782	792	594
Miscellaneous	3	.....	4
All other and unclassified	3	.....	4
Total	939	1,123	957
WEST COAST UNITED STATES TO EUROPE:			
Canned and refrigerated foods	145	128	121
Canned foods, miscellaneous .....	.....	.....	1
Refrigerated foods	145	128	120
Fish	54	64	54
Fruit, excluding bananas	7	2	11
Other and unclassified	84	62	55
Chemicals and petroleum chemicals, miscellaneous	83	62	66
Coal and coke	195	368	56
Grains	125	39	137
Barley	26	.....	.....
Rice	99	14	119
Wheat .....	.....	25	18
Lumber and products	781	376	395
Boards and planks	212	158	141
Plywood, veneers, composition board	92	49	38
Pulpwood	214	157	201
Other and unclassified	263	12	15
Manufactures of iron and steel, miscellaneous .....	.....	1	.....
Minerals, miscellaneous	405	437	477
Borax	339	385	410
Soda and sodium compound	34	10	.....
Sulfur	32	42	67

**Table 11.—Important Commodity Shipments Over Principal Trade Routes
Pacific to Atlantic—Continued**

[Thousands of long tons]

	<i>Fiscal year</i>		
	1987	1986	1985
WEST COAST UNITED STATES TO EUROPE—			
Continued			
Nitrates, phosphates, and potash	44	13	9
Fishmeal	18	13	9
Fertilizers, miscellaneous	26	.....	.....
Ores and metals	283	49	48
Ores	225	26	3
Copper	10	.....	.....
Lead	76	5	.....
Zinc	130	15	.....
Other and unclassified	9	6	3
Metals	58	23	44
Aluminum .....	.....	.....	27
Copper .....	.....	.....	11
Lead	12	2	.....
Scrap	23	.....	.....
Zinc	23	.....	1
Other and unclassified .....	.....	21	6
Other agricultural commodities	4	4	21
Beans, edible .....	.....	1	.....
Cotton, raw	4	3	21
Petroleum and products	2,306	2,672	1,502
Diesel oil	41	212	99
Lubricating oil	52	.....	.....
Petroleum coke	1,817	2,100	1,279
Residual fuel oil	336	270	123
Gasoline .....	.....	38	.....
Other and unclassified	60	52	1
Miscellaneous	1,018	817	770
Clay, fire and china	7	12	11
Groceries, miscellaneous	5	25	.....
Oil, vegetable	14	8	15
Paper and paper products	54	45	26
Slag .....	.....	.....	15
All other and unclassified	938	727	703
Total	5,389	4,966	3,602
WEST COAST UNITED STATES TO AFRICA:			
Grains	806	178	576
Rice	32	11	185
Wheat	774	167	391
Lumber and products, miscellaneous	3	22	.....
Minerals, miscellaneous	230	183	112
Sulfur	206	183	47
Soda and sodium compound	24	.....	65
Nitrates, phosphates, and potash	13	12	.....
Petroleum and products, miscellaneous	52	.....	.....
Miscellaneous	17	36	58
Cotton, raw	7	31	27
Textiles	9	.....	.....
All other and unclassified	1	5	31
Total	1,121	431	746

**Table 11.—Important Commodity Shipments Over Principal Trade Routes
Pacific to Atlantic—Continued**

[Thousands of long tons]

	Fiscal year		
	1987	1986	1985
WEST COAST CANADA TO EAST COAST UNITED STATES:			
Chemicals and petroleum chemicals, miscellaneous . . .	200	149	257
Coal and coke, coal type	42	.....	74
Grains	29	.....	.....
Oats	29	.....	.....
Lumber and products	1,839	1,750	1,605
Boards and planks	1,839	1,750	1,520
Pulpwood . . . . .	.....	.....	35
Other and unclassified . . . . .	.....	33	50
Nitrates, phosphates, potash	34	20	280
Potash . . . . .	.....	20	280
Fertilizers, unclassified	34	.....	.....
Ores and metals . . . . .	.....	.....	1
Other and unclassified . . . . .	.....	.....	1
Petroleum and products	270	495	100
Crude oil	270	402	56
Diesel oil . . . . .	.....	27	44
Gasoline . . . . .	.....	11	.....
Residual fuel oil . . . . .	.....	6	.....
Others and unclassified . . . . .	.....	49	.....
Miscellaneous	4	7	21
All other and unclassified	4	7	21
Total	2,418	2,421	2,338
WEST COAST CANADA TO EAST COAST SOUTH AMERICA:			
Coal . . . . .	.....	146	194
Grains	136	277	285
Barley	87	.....	.....
Wheat	49	277	285
Lumber and products	66	55	61
Pulpwood	66	55	61
Minerals, miscellaneous	204	250	265
Sulfur	203	250	250
Other and unclassified	1	.....	15
Nitrates, phosphates, and potash	1	110	19
Fertilizers, unclassified . . . . .	.....	23	.....
Potash . . . . .	.....	87	18
Other and unclassified	1	.....	1
Ores and metals, miscellaneous	6	.....	17
Miscellaneous	40	57	44
Paper and paper products	34	45	38
All other and unclassified	6	12	6
Total	453	895	885
WEST COAST CANADA TO WEST INDIES:			
Chemicals and petroleum chemicals, miscellaneous . . .	.....	20	2
Lumber and products	43	36	36
Boards and planks	43	36	36
Minerals, miscellaneous	33	111	136
Sulfur	33	111	136

**Table 11.—Important Commodity Shipments Over Principal Trade Routes
Pacific to Atlantic—Continued**

[Thousands of long tons]

	Fiscal year		
	1987	1986	1985
WEST COAST CANADA TO WEST INDIES—			
Continued			
Nitrates, phosphates, and potash, miscellaneous	28	8	17
Petroleum and products .....	.....	21	10
Diesel oil .....	.....	21	10
Miscellaneous	7	17	24
Paper and paper products	4	5	17
All other and unclassified	3	12	7
Total	111	213	225
WEST COAST CANADA TO EUROPE:			
Canned and refrigerated foods, miscellaneous	25	42	24
Chemicals and petroleum chemicals, miscellaneous	17	92	198
Coal and coke	1,116	1,800	2,103
Grains	574	974	664
Barley	308	385	354
Wheat	221	509	310
Other and unclassified	45	80	.....
Lumber and products	2,904	2,530	1,926
Boards and planks	1,326	1,030	642
Plywood, veneers, composition board	130	155	192
Pulpwood	1,223	1,146	968
Other and unclassified	225	199	124
Minerals, miscellaneous	734	1,492	1,281
Asbestos	1	3	1
Sulfur	733	1,481	1,280
Borax .....	.....	8	.....
Nitrates, phosphates, and potash	76	56	.....
Potash	69	14	.....
Fishmeal .....	.....	4	.....
Fertilizer, unclassified	7	38	.....
Ores and metals	86	53	49
Ores	50	15	21
Copper	38	.....	.....
Zinc .....	.....	.....	4
Lead	5	12	12
Other and unclassified	7	3	5
Metals	36	38	28
Aluminum	1	2	.....
Lead	11	15	14
Zinc	24	21	14
Other agricultural commodities	156	56	80
Oilseeds	149	47	68
Other and unclassified	7	9	12
Petroleum and products	80	92	86
Petroleum coke	79	92	66
Other and unclassified	1	.....	20
Miscellaneous	585	609	547
Paper and paper products	241	252	305
Seeds	30	50	6
Tallow	11	3	1
All other and unclassified	303	304	235
Total	6,353	7,796	6,958

**Table 11.—Important Commodity Shipments Over Principal Trade Routes
Pacific to Atlantic—Continued**

[Thousands of long tons]

	Fiscal year		
	1987	1986	1985
WEST COAST CANADA TO AFRICA:			
Grains	292	379	547
Wheat	292	379	547
Lumber and products	36	1	264
Boards and planks	32	.....	253
Pulpwood .....	.....	1	11
Other and unclassified	4	.....	.....
Minerals, miscellaneous	1,855	1,257	1,189
Soda and sodium compounds	9	.....	.....
Sulfur	1,846	1,257	1,189
Nitrates, phosphates, and potash	10	18	15
Potash	10	18	15
Miscellaneous	13	9	55
All other and unclassified	13	9	55
Total	2,206	1,664	2,070
WEST COAST CANADA TO ASIA (MIDDLE EAST):			
Grains	150	154	172
Barley	135	129	67
Wheat	15	25	105
Lumber and products	46	.....	13
Other and unclassified	46	.....	13
Minerals, miscellaneous	172	41	82
Sulfur	172	41	82
Total	369	195	267
WEST COAST CENTRAL AMERICA TO EAST COAST UNITED STATES:			
Canned and refrigerated foods	35	31	34
Refrigerated foods	35	31	34
Bananas	33	31	32
Other and unclassified	2	.....	2
Chemicals and petroleum chemicals, miscellaneous	12	23	23
Manufactures of iron and steel	10	8	9
Minerals, miscellaneous	421	313	58
Salt	421	313	58
Nitrates, phosphates, and potash	18	14	26
Fishmeal	18	14	26
Other agricultural commodities	405	490	558
Coffee	7	11	27
Molasses	205	159	188
Sugar	193	320	341
Other and unclassified .....	.....	.....	2
Petroleum and products	5	29	46
Miscellaneous	1	4	30
All other and unclassified	1	4	30
Total	907	912	761
WEST COAST CENTRAL AMERICA TO EAST COAST CENTRAL AMERICA			
Chemicals, miscellaneous	56	.....	.....
Grains, miscellaneous	6	33	.....

**Table 11.—Important Commodity Shipments Over Principal Trade Routes
Pacific to Atlantic—Continued**

[Thousands of long tons]

	<i>Fiscal year</i>		
	1987	1986	1985
WEST COAST CENTRAL AMERICA TO EAST COAST CENTRAL AMERICA—Continued			
Nitrates, phosphates, and potash	253	351	310
Phosphates	342	338	302
Fertilizer, unclassified	11	13	8
Petroleum and products	6	101	7
Diesel oil	2	30	5
Gasoline	3	70	1
Kerosene	1	1	1
Miscellaneous	3	13	7
All other and unclassified	3	13	7
Total	324	498	324
WEST COAST CENTRAL AMERICA TO EAST COAST SOUTH AMERICA:			
Canned and refrigerated foods	22	33	26
Refrigerated foods	22	33	26
Fish	22	33	26
Chemicals and petroleum chemicals, miscellaneous	6	.....	.....
Grains .....	.....	34	9
Corn .....	.....	9	9
Sorghum .....	.....	25	.....
Ores and metals	11	10	.....
Metals	11	.....	.....
Aluminum	1	.....	.....
Copper	10	.....	.....
Ores .....	.....	10	.....
Copper .....	.....	10	.....
Minerals, miscellaneous	129	65	.....
Salt	129	65	.....
Miscellaneous	2	9	23
All other and unclassified	2	9	23
Total	170	151	58
WEST COAST CENTRAL AMERICA TO WEST INDIES:			
Canned and refrigerated foods	149	132	78
Refrigerated foods, miscellaneous	149	132	78
Chemicals and petroleum chemicals, miscellaneous	10	11	2
Lumber and products	23	17	23
Boards and planks	19	17	23
Other and unclassified	4	.....	.....
Other agricultural commodities	33	46	26
Molasses	7	.....	6
Sugar, raw	20	46	13
Other and unclassified	6	.....	7
Petroleum and products, miscellaneous	13	.....	29
Miscellaneous	12	44	20
Rice .....	.....	17	.....
All other and unclassified	12	27	20
Total	240	250	178

**Table 11.—Important Commodity Shipments Over Principal Trade Routes
Pacific to Atlantic—Continued**

[Thousands of long tons]

	Fiscal year		
	1987	1986	1985
WEST COAST CENTRAL AMERICA TO EUROPE:			
Canned and refrigerated foods	155	156	89
Canned foods, miscellaneous	2	.....	.....
Refrigerated foods	153	156	89
Bananas	82	99	43
Other and unclassified	71	57	46
Chemicals and petroleum chemicals, miscellaneous .....	.....	.....	6
Lumber and products	12	10	9
Boards and planks	12	10	9
Manufactures of iron and steel, miscellaneous	1	.....	.....
Nitrates, phosphates, and potash	1	5	.....
Fishmeal	1	5	.....
Ores and metals	230	175	141
Ores	168	174	140
Copper	159	166	135
Other and unclassified	9	8	5
Metals	62	1	1
Copper	58	.....	.....
Other and unclassified	4	1	1
Other agricultural commodities	420	316	340
Coffee	95	90	123
Cotton, raw	24	22	69
Molasses	59	10	59
Oilseeds	3	2	7
Peas, dried	31	21	37
Sugar	208	171	45
Miscellaneous	66	68	75
Clay, fire and china	11	.....	.....
Seeds, excluding oilseeds	1	7	2
Textiles .....	.....	1	1
Tobacco and manufactures .....	.....	1	1
All other and unclassified	54	59	71
Total	885	730	660
WEST COAST SOUTH AMERICA TO EAST COAST UNITED STATES:			
Canned and refrigerated foods	807	787	737
Canned foods, miscellaneous	10	14	18
Refrigerated foods	797	773	719
Bananas	416	470	435
Fish	37	25	31
Fruit, excluding bananas	315	264	243
Refrigerated, miscellaneous	29	14	10
Chemicals and petroleum chemicals, miscellaneous	12	40	11
Chemicals, miscellaneous	11	17	5
Benzene .....	.....	15	2
Toulene .....	.....	4	.....
Petrochemicals, miscellaneous	1	4	4
Lumber and products	39	44	57
Boards and planks	11	21	24
Pulpwood	14	9	11
Other and unclassified	14	14	22
Manufactures of iron and steel, miscellaneous	62	10	26

**Table 11.—Important Commodity Shipments Over Principal Trade Routes
Pacific to Atlantic—Continued**

[Thousands of long tons]

	Fiscal year		
	1987	1986	1985
WEST COAST SOUTH AMERICA TO EAST COAST UNITED STATES—Continued			
Minerals, miscellaneous	559	332	467
Salt	556	331	462
Soda and sodium compounds .....	.....	.....	5
Other and unclassified	3	1	.....
Nitrates, phosphates, and potash	212	229	255
Fishmeal	96	109	114
Nitrate of soda	113	97	141
Fertilizers, miscellaneous .....	.....	23	.....
All other and unclassified	3	.....	.....
Ores and metals	642	581	630
Ores	387	275	399
Copper	30	15	26
Iron	328	181	217
Lead .....	.....	2	20
Tin	9	4	3
Zinc	19	44	29
Other and unclassified	1	29	104
Metals	255	306	231
Copper	192	225	178
Iron	20	19	.....
Lead .....	.....	6	10
Zinc	23	46	31
Other and unclassified	20	10	12
Other agricultural commodities	331	501	647
Beans, edible	1	.....	1
Cocoa and cacao beans	30	30	61
Coffee	104	139	143
Cotton, raw	1	4	3
Molasses	60	109	172
Sugar	135	219	267
Petroleum and products	4,367	5,874	4,596
Crude oil	2,330	4,294	2,686
Fuel oil, residual	1,942	1,481	1,743
Diesel oil .....	.....	28	49
Gasoline	94	25	118
Other and unclassified	1	46	.....
Miscellaneous	379	250	234
Fibers, plant	2	3	4
Groceries, miscellaneous	9	6	6
Oil, vegetable	21	13	5
Paper and products	3	14	9
Textiles	8	10	8
All other and unclassified	336	204	202
Total	7,410	8,648	7,660
WEST COAST SOUTH AMERICA TO EAST COAST CANADA:			
Nitrates, phosphates, and potash	8	4	4
Nitrate of soda	8	4	4
Ores and metals, miscellaneous	77	81	97
Petroleum and products	47	.....	.....
Residual fuel oil	47	.....	.....
Miscellaneous	5	5	6
All other and unclassified	5	5	6
Total	137	90	107

**Table 11.—Important Commodity Shipments Over Principal Trade Routes
Pacific to Atlantic—Continued**

[Thousands of long tons]

	Fiscal year		
	1987	1986	1985
WEST COAST SOUTH AMERICA TO EAST COAST CENTRAL AMERICA:			
Manufactures of iron and steel, miscellaneous			2
Ores and metals	24	3	8
Ores, miscellaneous	19	3	3
Metals, miscellaneous	5		5
Other agricultural commodities	29	27	38
Beans, edible	29	27	38
Petroleum and products	565	763	662
Crude oil	565	760	629
Other and unclassified		3	33
Miscellaneous	6	8	3
All other and unclassified	6	8	3
Total	624	801	713
WEST COAST SOUTH AMERICA TO EAST COAST SOUTH AMERICA:			
Canned and refrigerated foods	13	2	7
Canned foods, miscellaneous	6		2
Refrigerated foods, miscellaneous	7	2	5
Chemicals and petroleum chemicals, miscellaneous	16	9	11
Lumber and products, miscellaneous	59	46	28
Manufactures of iron and steel, miscellaneous		1	
Minerals, miscellaneous	7	40	3
Ores and metals, miscellaneous	48	90	82
Other agricultural commodities	21	27	110
Beans, edible	10	24	2
Sugar	10	2	80
Other and unclassified	1	1	28
Petroleum and products	77	543	995
Crude oil	66	512	905
Gasoline	11	31	90
Miscellaneous	82	74	85
Oil, fish	1		1
Oil, vegetable	10	36	16
Paper and paper products	18	23	17
All other and unclassified	53	15	51
Total	323	832	1,321
WEST COAST SOUTH AMERICA TO WEST INDIES:			
Canned and refrigerated foods	37	31	54
Canned foods, miscellaneous			1
Fish, refrigerated	35	31	53
Other and unclassified	2		
Lumber and products	102	60	61
Boards and planks	83	59	57
Pulpwood	10		
Other and unclassified	9	1	4
Nitrates, phosphates, and potash	18	15	72
Fishmeal	18	15	20
Phosphates			52
Other agricultural products	36		
Molasses	25		

**Table 11.—Important Commodity Shipments Over Principal Trade Routes
Pacific to Atlantic—Continued**

[Thousands of long tons]

	Fiscal year		
	1987	1986	1985
WEST COAST SOUTH AMERICA TO WEST INDIES—			
Continued			
Other agricultural products—Continued			
Sugar	10	.....	.....
Other and unclassified	1	.....	.....
Petroleum and products	1,887	3,098	3,818
Crude oil	1,224	1,960	2,875
Diesel oil	56	.....	44
Fuel oil, residual	605	1,138	899
Other and unclassified	2	.....	.....
Miscellaneous	15	16	10
All other and unclassified	15	16	10
Total	2,095	3,220	4,015
WEST COAST SOUTH AMERICA TO EUROPE:			
Canned and refrigerated foods	1,091	941	1,018
Canned foods, miscellaneous	9	9	15
Refrigerated foods	1,082	932	1,003
Bananas	388	370	307
Fish, refrigerated	378	281	506
Fruit, excluding bananas	251	218	140
Other and unclassified	65	63	50
Chemicals and petroleum chemicals, miscellaneous	6	21	5
Coke, coal type	2	12	.....
Grains, miscellaneous	12	18	.....
Lumber and products	523	214	123
Boards and planks	110	39	22
Pulpwood	145	167	96
Other and unclassified	268	8	5
Manufactures of iron and steel .....	.....	10	.....
Nitrates, phosphates, and potash	1,205	1,277	1,171
Fertilizers, unclassified .....	.....	1	.....
Fishmeal	1,073	1,159	1,073
Nitrate of soda	132	117	95
Potash .....	.....	.....	3
Ores and metals	1,610	1,768	1,664
Ores	959	955	918
Copper	218	296	176
Iron	136	3	112
Lead	81	101	100
Tin	6	26	22
Zinc	469	498	420
Other and unclassified	49	31	88
Metals	651	813	746
Copper	555	672	581
Lead	18	43	52
Zinc	58	90	92
Other and unclassified	20	8	21
Other agricultural commodities	195	203	149
Cocoa and cacao beans	12	26	11
Coffee	138	133	111
Cotton, raw	9	15	21
Molasses	22	6	.....
Oilseeds	8	9	.....
Wool, raw	2	6	6

**Table 11.—Important Commodity Shipments Over Principal Trade Routes
Pacific to Atlantic—Continued**

[Thousands of long tons]

	Fiscal year		
	1987	1986	1985
WEST COAST SOUTH AMERICA TO EUROPE—			
Continued			
Other agricultural commodities—Continued			
Other and unclassified	4	8	.....
Petroleum and products .....	.....	.....	106
Fuel oil, residual .....	.....	.....	86
Other and unclassified .....	.....	.....	20
Miscellaneous	628	622	490
Groceries, miscellaneous	12	7	6
Oil, fish	77	157	106
Paper and paper products	18	5	1
Seeds, excluding oilseeds .....	.....	.....	1
Textiles	5	9	7
All other and unclassified	516	444	369
Total	<u>5,272</u>	<u>5,086</u>	<u>4,726</u>
HAWAII TO EAST COAST UNITED STATES:			
Other agricultural commodities	422	286	168
Sugar	422	286	168
Miscellaneous	1	13	7
All other and unclassified	1	13	7
Total	<u>423</u>	<u>299</u>	<u>175</u>
OCEANIA TO EAST COAST UNITED STATES:			
Canned and refrigerated foods	381	356	324
Refrigerated foods	381	356	324
Dairy products .....	.....	1	.....
Fruit, refrigerated	28	19	20
Meat	51	29	14
Other and unclassified	302	307	290
Chemicals and petroleum chemicals, miscellaneous	140	60	1
Coal and coke	206	.....	.....
Manufactures of iron and steel, miscellaneous	25	68	22
Nitrates, phosphates, and potash	60	47	31
Ores and metals	1,122	1,316	1,492
Ores	1,082	1,254	1,488
Alumina/bauxite	544	646	894
Lead	87	10	5
Manganese	2	92	57
Other and unclassified	449	506	532
Metals	40	62	4
Aluminum metal	34	54	.....
Lead metal .....	.....	.....	4
Zinc .....	.....	3	.....
Other and unclassified	6	5	.....
Other agricultural commodities	292	329	400
Molasses	166	177	273
Sugar	126	150	127
Wool, raw .....	.....	2	.....
Petroleum and products	270	277	112
Crude oil .....	.....	177	.....
Fuel oil, residual	111	39	32
Liquefied gas	127	47	2

**Table 11.—Important Commodity Shipments Over Principal Trade Routes
Pacific to Atlantic—Continued**

[Thousands of long tons]

	<i>Fiscal year</i>		
	1987	1986	1985
OCEANIA TO EAST COAST UNITED STATES—			
Continued			
Petroleum and products—Continued			
Lubricating oil	32	14	30
Other and unclassified . . . . .	.....	.....	48
Miscellaneous	342	314	379
All Other and unclassified	342	314	379
Total	2,838	2,720	2,730
OCEANIA TO EAST COAST CANADA:			
Canned and refrigerated foods	70	61	40
Refrigerated foods	70	61	40
Other and unclassified	70	61	40
Ores and metals	22	48	24
Ores, miscellaneous	22	48	24
Other agricultural commodities	397	266	298
Sugar	397	266	298
Miscellaneous	66	42	56
All other and unclassified	66	42	56
Total	555	417	418
OCEANIA TO EAST COAST CENTRAL AMERICA:			
Canned and refrigerated foods, miscellaneous	13	18	37
Ores and metals	81	120	136
Manganese ore	64	87	93
Ores, miscellaneous	17	33	43
Other agricultural commodities	23	.....	.....
Oilseeds	23	.....	.....
Miscellaneous . . . . .	.....	1	.....
All other and unclassified . . . . .	.....	1	.....
Total	117	139	173
OCEANIA TO WEST INDIES:			
Canned and refrigerated foods	53	73	93
Canned foods, miscellaneous	8	16	8
Refrigerated foods	45	57	85
Dairy products	8	12	14
Fish, refrigerated	20	27	56
Other and unclassified	17	18	15
Petroleum and products . . . . .	.....	.....	47
Miscellaneous	19	18	13
All other and unclassified	19	18	13
Total	72	91	153
OCEANIA TO EUROPE:			
Canned and refrigerated foods	244	190	160
Canned foods, miscellaneous	1	.....	5
Refrigerated foods	243	190	155
Dairy products	9	.....	2
Fruit, excluding bananas	218	148	123
Meat	6	3	20
Other and unclassified	10	39	10

**Table 11.—Important Commodity Shipments Over Principal Trade Routes
Pacific to Atlantic—Continued**

[Thousands of long tons]

	Fiscal year		
	1987	1986	1985
OCEANIA TO EUROPE—Continued			
Chemicals and petroleum chemicals, miscellaneous	90	113	227
Grains, miscellaneous	11	.....	.....
Ores and metals	259	131	37
Ores	227	116	29
Copper	174	93	.....
Other and unclassified	53	23	29
Metals	32	15	8
Other and unclassified	32	15	8
Other agricultural commodities	161	186	224
Copra	6	8	.....
Molasses	27	28	30
Oilseeds . . . . .	.....	1	.....
Sugar	127	147	184
Wool, raw . . . . .	.....	2	10
Other and unclassified	1	.....	.....
Miscellaneous	264	266	247
Oil, coconut	4	2	4
Oil, vegetable	3	.....	7
Tallow . . . . .	.....	23	16
All other and unclassified	257	241	220
Total	1,029	886	895
ASIA TO EAST COAST UNITED STATES:			
Canned and refrigerated foods	139	115	135
Canned foods	10	19	50
Fruit	10	19	45
Other and unclassified . . . . .	.....	.....	5
Refrigerated foods	129	96	85
Fruit, refrigerated . . . . .	.....	12	.....
Other and unclassified	129	84	85
Chemicals and petroleum chemicals, miscellaneous	210	210	206
Chemicals, miscellaneous	145	143	93
Benzene	59	48	61
Toulene . . . . .	.....	16	44
Petrochemicals, miscellaneous	6	3	8
Coal and coke	380	229	447
Lumber and products	897	686	745
Boards and planks	67	81	150
Plywood, veneers, composition board	759	545	541
Other and unclassified	71	60	54
Machinery and equipment	2,157	2,021	1,519
Agricultural machinery	16	9	17
Automobiles, trucks, accessories and parts	1,943	1,840	1,369
Construction machinery and equipment	133	116	88
Electrical machinery and apparatus	12	8	9
Other and unclassified	53	48	36
Manufactures of iron and steel	3,255	3,650	4,596
Angles, shapes, and sections	278	213	399
Nails, tacks, and spikes	42	51	64
Plates, sheets, and coils	1,337	1,520	1,624
Tubes, pipes, and fittings	205	615	741
Wire, bars, and rods	188	258	221
Other and unclassified	1,205	993	1,547

**Table 11.—Important Commodity Shipments Over Principal Trade Routes
Pacific to Atlantic—Continued**

[Thousands of long tons]

	<i>Fiscal year</i>		
	1987	1986	1985
ASIA TO EAST COAST UNITED STATES—Continued			
Nitrates, phosphates, and potash	50	20	2
Fertilizers, unclassified	50	20	2
Ores and metals	771	839	1,418
Ores	757	780	1,344
Alumina/bauxite	155	164	168
Chrome	5	13	49
Iron	62	.....	.....
Manganese	14	10	.....
Other and unclassified	521	593	1,127
Metals	14	59	74
Aluminum	10	35	43
Copper .....	.....	.....	2
Iron .....	.....	19	1
Other and unclassified	4	5	28
Other and unclassified	200	310	348
Coffee	1	4	3
Copra	2	.....	2
Rubber, raw	43	66	94
Sugar	150	240	248
Other and unclassified	4	.....	1
Petroleum and products	374	353	235
Crude petroleum	92	52	.....
Diesel oil .....	.....	17	.....
Fuel oil, residual	104	.....	.....
Gasoline	53	174	164
Liquefied gas	15	18	.....
Lubricating oil	19	75	23
Petroleum coke	59	11	40
Other and unclassified	32	6	8
Miscellaneous	5,408	5,777	5,241
Bricks and tile	2	1	8
Cement	1	20	.....
Clay, fire and china	3	.....	25
Glass and glassware	1	.....	.....
Groceries, miscellaneous	7	.....	6
Oil, coconut	18	26	32
Oil, vegetable	21	78	37
Porcelainware	1	.....	.....
Rubber, manufactured	6	1	26
Textiles	1	1	5
All other and unclassified	5,347	5,650	5,102
Total	13,841	14,210	14,892
ASIA TO EAST COAST CANADA:			
Canned and refrigerated foods, miscellaneous	7	4	4
Machinery and equipment	14	10	1
Other and unclassified	14	10	1
Manufactures of iron and steel	11	20	26
Plates, sheets, and coils	7	1	15
Tubes, pipes, and fittings .....	.....	4	4
Other and unclassified	4	15	7
Ores and metals	42	70	97
Ores	42	70	89
Alumina/bauxite	20	42	76

**Table 11.—Important Commodity Shipments Over Principal Trade Routes
Pacific to Atlantic—Continued**

[Thousands of long tons]

	<i>Fiscal year</i>		
	1987	1986	1985
ASIA TO EAST COAST CANADA—Continued			
Ores and metals—Continued			
Other and unclassified	22	28	13
Metals .....	.....	.....	8
Other and unclassified .....	.....	.....	8
Other agricultural commodities	11	38	.....
Cotton	11	38	.....
Miscellaneous	346	267	296
All other and unclassified	346	267	296
Total	431	409	424
ASIA TO EAST COAST SOUTH AMERICA:			
Chemicals and petroleum chemicals, miscellaneous	18	.....	.....
Coal and coke	61	19	33
Grains, miscellaneous .....	.....	.....	48
Machinery and equipment	32	46	39
Automobiles, trucks, accessories and parts	16	19	14
Construction machinery and equipment	4	2	5
Electrical machinery and apparatus	7	8	12
Other and unclassified	5	17	8
Manufactures of iron and steel	79	130	223
Plates, sheets, and coils	48	44	62
Tubes, pipes, and fittings	5	51	128
Wires, bars, and rods	19	18	14
Other and unclassified	7	17	19
Nitrates, phosphates, and potash .....	.....	22	4
Fertilizers, unclassified .....	.....	22	4
Ores and metals	21	66	26
Ores	14	65	20
Alumina/bauxite .....	.....	9	.....
Other and unclassified	14	56	20
Metals	7	1	6
Tin, including tinplate	3	1	1
Other and unclassified	4	.....	5
Other agricultural commodities	16	2	2
Cotton	4	.....	.....
Oilseeds	8	.....	.....
Rubber, raw	4	2	2
Miscellaneous	181	160	176
Resin	1	1	1
Rubber, manufactured	5	8	3
Textiles	1	2	1
All other and unclassified	174	149	171
Total	408	445	551
ASIA TO CRISTOBAL, R.P.:			
Machinery and equipment	8	6	7
Electrical machinery and apparatus	2	1	1
Other and unclassified	6	5	6
Manufactures of iron and steel, miscellaneous	28	32	26
Miscellaneous	176	110	100
Textiles	1	.....	.....
All other and unclassified	175	110	100
Total	212	148	133

**Table 11.—Important Commodity Shipments Over Principal Trade Routes
Pacific to Atlantic—Continued**

[Thousands of long tons]

	Fiscal year		
	1987	1986	1985
ASIA TO WEST INDIES:			
Canned and refrigerated foods	20	37	51
Canned foods, miscellaneous	10	21	33
Refrigerated foods	10	16	18
Fish, refrigerated	9	15	16
Other and unclassified	1	1	2
Chemicals and petroleum chemicals, miscellaneous	18	.....	13
Coal and coke	5	11	18
Grains	117	134	118
Corn .....	.....	.....	1
Rice	107	126	104
Soybeans	10	7	10
Grains, miscellaneous .....	.....	1	3
Lumber and products	266	233	196
Boards and planks	240	204	165
Plywood veneers	10	14	13
Pulpwood	6	15	10
Other and unclassified	10	.....	8
Machinery and equipment	157	233	232
Automobiles, trucks, accessories and parts	147	206	193
Electrical machinery and apparatus	3	6	15
Other and unclassified	7	21	24
Manufactures of iron and steel	137	196	118
Angles, shapes and sections	15	5	11
Plates, sheets, and coils	65	66	63
Tubes, pipes, and fittings	15	29	24
Wires, bars, and rods	24	66	13
Other and unclassified	18	30	7
Nitrates, phosphates and potash	6	35	2
Fertilizers, unclassified	6	26	1
Fishmeal .....	.....	9	1
Ores and metals	10	22	54
Metals, miscellaneous	7	11	23
Ores, miscellaneous	3	11	31
Petroleum and products	73	80	119
Diesel oil	9	1	.....
Gasoline	63	72	119
Kerosene .....	.....	7	.....
Other and unclassified	1	.....	.....
Miscellaneous	495	478	400
Bricks and tile	2	1	2
Glass and glassware	3	4	3
Groceries, miscellaneous	2	1	2
Paper and paper products	11	5	12
Porcelainware	2	1	1
Resin .....	.....	1	1
Rubber, manufactured	3	6	4
Textiles	5	8	11
All other and unclassified	467	451	364
Total	1,304	1,459	1,321

ASIA TO EUROPE:

Canned and refrigerated foods	8	5	16
Chemicals and petroleum chemicals, miscellaneous	36	19	10

**Table 11.—Important Commodity Shipments Over Principal Trade Routes
Pacific to Atlantic—Continued**

[Thousands of long tons]

	<i>Fiscal year</i>		
	1987	1986	1985
ASIA TO EUROPE—Continued			
Machinery and equipment	6	1	2
Automobiles, trucks, accessories and parts	3	.....	2
Other and unclassified	3	1	.....
Ores and metals, miscellaneous .....	.....	.....	3
Other agricultural commodities	10	6	.....
Cotton	7	6	.....
Oilseeds	3	.....	.....
Petroleum and products, miscellaneous	30	6	1
Miscellaneous	102	169	101
Oil, coconut	10	14	4
Oil, fish	44	39	44
Oil, vegetable	13	1	5
All other and unclassified	35	115	48
Total	192	206	133

Table 12.—Principal Canal Commodities by Direction—Fiscal Year 1987

[Long tons]

<i>Commodity</i>	<i>Atlantic to Pacific</i>	<i>Pacific to Atlantic</i>	<i>Total</i>
Ammonium compounds	780,533	15,948	796,481
Asbestos	16,395	2,664	19,059
Asphalt	138,539	2,097	140,636
Automobiles, trucks, and accessories	341,985	2,119,771	2,461,756
Bananas	17,361	965,115	982,476
Barley	126,819	591,962	718,781
Beans, edible	29,531	49,485	79,016
Benzene	87,043	68,562	155,605
Borax	3,171	379,448	382,619
Bricks and tile	15,239	6,503	21,742
Canned food products	86,803	89,397	176,200
Carbon black	6,498	84,415	90,913
Caustic soda	893,281	4,446	897,727
Cement	249,183	2,864	252,047
Chemicals, petroleum various	853,757	78,417	932,174
Chemicals, various	2,810,900	818,479	3,629,379
Clay, fire and china	440,161	27,092	467,253
Coal and coke (excluding petroleum coke)	5,901,925	2,020,198	7,922,123
Cocoa and cacao beans	2,003	42,084	44,087
Coffee	13,454	355,034	368,488
Coke, petroleum	1,146,651	2,102,947	3,249,598
Copra and coconuts	1,630	7,539	9,169
Corn	15,882,551	106	15,882,657
Cotton, raw	8,523	76,818	85,341
Fertilizers, various	2,462,473	213,187	2,675,660
Fibers, plant	10,568	7,422	17,990
Fishmeal	2,144	1,296,189	1,298,333
Flour, wheat	190,615	602	191,217
Gasoline	2,428,014	256,739	2,684,753
Glass and glassware	18,155	4,841	22,996
Grains, various	294,460	71,106	365,566
Groceries, various	36,736	46,397	83,133
Infusorial earth	234	21,927	22,161
Jet fuel	1,000,624	32,192	1,032,816
Kerosene	98,093	5,641	103,734
Liquefied gas	1,123,429	150,979	1,274,408
Liquors	11,553	27,084	38,637
Lumber and products (excluding pulpwood)	74,291	5,986,750	6,061,041
Machinery, agricultural	46,820	17,989	64,809
Machinery, construction	65,521	155,562	221,083
Machinery, electrical	24,449	24,483	48,932
Machinery, various	61,643	69,120	130,763
Manufactures of iron and steel	3,346,009	3,626,065	6,972,074
Metal, aluminum	365,149	50,581	415,730
Metal, copper	15,447	827,467	842,914
Metal, iron	30,104	24,910	55,014
Metal, scrap	2,390,474	22,791	2,413,265
Metals, various (including tinplate)	50,930	290,455	341,385
Molasses	6,801	656,319	663,120
Nitrate of soda	27,302	265,136	292,438
Oats	8,073	38,332	46,405
Oil, coconut	5,068	38,478	43,546
Oil, crude	3,393,100	5,565,628	8,958,728
Oil, diesel	1,171,441	199,187	1,370,628
Oil, fish	42	125,467	125,509
Oil, lube	596,688	253,006	849,694
Oil, residual fuel	1,783,812	4,118,095	5,901,907
Oil, vegetable	166,786	114,113	280,899

Table 12.—Principal Canal Commodities by Direction—Fiscal Year 1987—
Continued

[Long tons]

<i>Commodity</i>	<i>Atlantic to Pacific</i>	<i>Pacific to Atlantic</i>	<i>Total</i>
Oilseeds	48,702	237,741	286,443
Ore, alumina/bauxite	113,682	731,726	845,408
Ore, copper	35,478	725,497	760,975
Ore, iron	61,354	526,387	587,741
Ores, various	506,646	2,211,839	2,718,485
Paper and paper products	984,306	408,710	1,393,016
Peas, dry	73	43,738	43,811
Petroleum and products, various	212,734	153,457	366,191
Phosphates	6,269,275	242,413	6,511,688
Potash	346,584	81,497	428,081
Pulpwood	853,324	1,795,303	2,648,627
Refrigerated food products (excluding bananas)	592,372	2,458,651	3,051,023
Resin	165,585	1,691	167,276
Rice	76,221	344,028	420,249
Rubber, manufactured	16,238	14,340	30,578
Rubber, raw	2,844	48,078	50,922
Salt	117,643	1,109,614	1,227,257
Seeds, excluding oilseeds	291	33,030	33,321
Slag, clinkers, and dross	14,812	.....	14,812
Soda and sodium compounds	114,977	111,851	226,828
Sorghum	2,624,367	.....	2,624,367
Soybeans	7,757,762	31,133	7,788,895
Sugar	1,398,659	1,825,390	3,224,049
Sulfur	8,229	3,225,591	3,233,820
Tallow	76,757	22,584	99,341
Textiles	24,212	37,610	61,822
Tobacco and manufactures	3,366	1,542	4,908
Toluene	217,245	10,001	227,246
Wax, paraffin	6,931	6,644	13,575
Wheat	3,165,808	1,355,723	4,521,531
Wool, raw	1,244	2,950	4,194
All other	10,027,754	9,369,531	19,397,285
Total	<u>87,006,459</u>	<u>61,683,921</u>	<u>148,690,380</u>

Other Statistics

Table 13.—Water Supply and Usage

	Fiscal year		Percent of usage fiscal year	
	1987	1986	1987	1986
	(Acre-Feet)			
MADDEN AND GATUN LAKE WATER SUPPLY:				
Total runoff, Madden Lake Basin	2,416,059	2,010,239		
Evaporation from Madden Lake	<u>— 46,127</u>	<u>— 49,004</u>		
Available for Madden Lake usage	2,369,932	1,961,235		
Municipal water use Madden Lake	<u>—111,089</u>	<u>—106,648</u>		
Available for downstream usage	2,258,843	1,854,587		
Total runoff, Gatun Lake (area below Madden) ..	<u>2,388,222</u>	<u>1,699,672</u>		
Subtotal	4,647,065	3,554,259		
Evaporation from Gatun Lake	<u>—437,239</u>	<u>—436,190</u>		
Available for Gatun Lake watershed usage	<u>4,209,826</u>	<u>3,118,069</u>		
MADDEN LAKE WATER USAGE:				
Hydroelectric power	1,792,332	1,738,613	80	88
Leakage	14,479	14,479	1	1
Spillway discharge	305,992	115,657	14	6
Municipal	<u>111,089</u>	<u>106,648</u>	<u>5</u>	<u>5</u>
Total Madden Lake usage	<u>2,223,892</u>	<u>1,975,397</u>	<u>100</u>	<u>100</u>
GATUN LAKE WATER USAGE:				
Hydroelectric power	1,494,467	807,094	38	25
Lockages, Gatun and Pedro Miguel	2,013,223	2,009,160	51	63
Municipal and other usages	98,405	96,924	3	3
Spillway discharge	<u>333,999</u>	<u>302,365</u>	<u>8</u>	<u>9</u>
Total Gatun Lake usage	<u>3,940,094</u>	<u>3,215,543</u>	<u>100</u>	<u>100</u>

Table 14.—Dredging Operations—Fiscal Year 1987

	<i>(Cubid yards)</i>		
	<i>Earth</i>	<i>Rock</i>	<i>Total</i>
Pacific District	3,172,066	.....	3,172,066
Cucaracha Slide*	94,795	242,305	337,100
Central District	159,785	146,315	297,100
Atlantic District .....	.....	.....	.....
Grand Total	<u>3,426,646</u>	<u>388,620</u>	<u>3,806,266</u>

* October 13-December 23, 1986

Table 15.—Electrical Power Generated(Gigawatt hours) ¹

	Fiscal year	
	1986	1987
Generation:		
Gatun hydro station.....	49	96
Madden hydro station.....	190	200
Thermal generating stations.....	251	230
Gross generated by Panama Canal Commission.....	490	526
Less station service usage.....	(10)	(8)
Net total generated by Panama Canal Commission.....	480	518
Power Purchases:		
Through interconnect from Panama.....	10	2
Net Energy received for Wheeling.....	2	3
Power Sales:		
Through interconnect to Panama.....	(13)	(26)
Net power generated and purchased for Canal area only.....	479	496
Other power generated by military for own use.....	1	1
Total Canal area requirements.....	480	497
Power distributed to Commission's customers.....	454	467
Distribution losses.....	26	29
Peak load (thousands of kilowatts).....	82	84
Date of peak load.....	May 28	Sept. 28
Canal area load factor ²	67%	67%

¹ One gigawatt hour equal to 1 million kilowatt hours.² Total Canal area requirements divided by number of hours per year times peak load.**Table 16.—Fire Division Statistics**

	Fiscal year 1987		Fiscal year 1986	
	Num- ber of fires	Property loss	Num- ber of fires	Property loss
PCC.....	46	\$70,658	73	\$26,720
Armed Forces.....	207	19,112	256	19,057,309***
Private (including ships).....	46	279,351	51	215,713
R.P.*.....	225	4,982	162	121,506
Total.....	524	\$374,103	542	\$19,421,248
Value of Property involved in ship fires.....		\$20,742,589		\$515,971,836
Value of Property involved in other fires.....		49,798,902		137,894,808
Calls for Emergency Aid**.....		5,090		5,142
Total number of calls (all types) responded to...		5,748		5,804

* Responses made to areas reverted to the Republic of Panama but responded to by Commission forces, such as grass fires, burning railroad ties, etc.

** Includes responses by both ambulance and fire apparatuses.

*** \$19,000,000 of this amount represents the loss of a KC 135 U.S. Air Force aircraft that crashed at Rodman, U.S. Naval Military Base, Rodman, R.P.

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